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THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The Official Organ of

THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

VOLUME 16

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

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FOREWORD

by

The Lord Hurcomb,

Chairman of the
International Trust for Zoological Nomenclature

In accordance with the wish expressed at the Fifteenth International Congress of Zoology at its meeting held in London last summer consideration is being given by the International Trust for Zoological Nomenclature to the question of devising a simpler and less expensive form of production for the *Bulletin of Zoological Nomenclature*. It is hoped that it will be possible to make a preliminary announcement on this subject at an early date. It would clearly not be possible to introduce a new system of production in the middle of a volume and it has been decided therefore at once to close the current volume (Volume 16) of *Bulletin* by the publication of a concluding Part (Part 3) containing the Title Page for the volume, one paper which was already in proof on the eve of the opening of the London Congress and a brief subject index. This Part has been kindly prepared on the invitation of the Trust by Mr. Francis Hemming as having been Secretary to the Commission and Editor of the *Bulletin* during the period in which the earlier Parts of this Volume were published.

(*Signed*) **HURCOMB**

Office of the International Trust
for Zoological Nomenclature,
41 Queen's Gate,
London, S.W.7.

2nd September 1958.

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SECRETARYSHIP OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

PURCHASED
- 9 JUN 58

Retirement of Mr. Francis Hemming on account of ill-health

Statement issued by the International Trust for Zoological Nomenclature

The International Trust for Zoological Nomenclature announces with great regret that it has been informed by Mr. Francis Hemming, who has held the Office of Honorary Secretary to the International Commission on Zoological Nomenclature since 1936, that he has been told by his medical advisers that he must seek immediate relief from at least the greater part of his duties and that he ought not to incur the physical strain involved in completing the arrangements for the Colloquium on Zoological Nomenclature which is to be held in London next July immediately before the meeting of the Fifteenth International Congress of Zoology. At the same time Mr. Hemming, when informing the President of the International Commission, intimated that he did not propose to offer himself for re-election as Honorary Secretary for the period following the close of the coming Congress.

The situation created called for immediate action by the Trust since if any serious break were to occur in the preparations for the Colloquium the prospects for securing the final adoption by the Congress of a revised text for the International Code of Zoological Nomenclature would be seriously compromised.

Bull. zool. Nomencl., Vol. 16, pp. (I)—(VIII). Issued with Part 2. June 1958.

The International Trust has pleasure in announcing the following arrangements which it has made in consultation with Sir Gavin de Beer, Director, British Museum (Natural History), and President of the coming Fifteenth International Congress of Zoology :—

(1) With the consent of Sir William Pugh, Director of the Geological Survey, London, and with the approval of the Department of Scientific and Industrial Research and of H.M. Treasury, Mr. R. V. Melville, a senior member of the Palaeontological staff of the Survey, has been released for a period of one year to take immediate charge of the Office of the Commission with the title of " Assistant Secretary to, and Director of the Office of, the International Commission on Zoological Nomenclature ". In addition, Mr. Melville has been appointed Assistant Manager to the Trust.

(2) Mr. Melville will take up his new duties on Thursday, 1st May, 1958.

(3) Mr. Melville's first duty will be to obtain suitable accommodation for the Office of the Commission (which hitherto has been housed rent-free in Mr. Hemming's private residence) and to complete the arrangements for the meeting of the Colloquium on Zoological Nomenclature.

(4) At the request of the Trust and in order to assist Mr. Melville to concentrate his attention on the most urgent tasks, Mr. Hemming has consented to see through the press the edition of the *Official Lists* and *Official Indexes* now in the course of being printed and, in addition, to prepare the *Opinions* required to give effect to the decisions already taken by the Commission in a number of cases. Mr. Hemming has also agreed for the time being to retain the position of Managing Director and Secretary of the Trust.

In view of the close association between the work of the Section on Nomenclature of the International Congress of Zoology and the work of the Colloquium on Zoological Nomenclature, Sir Gavin de Beer, as President of the forthcoming Congress, has invited Mr. Melville to act as Recorder for the Section in succession to Mr. Hemming.

28 Park Village East,
Regent's Park,
LONDON, N.W.1.

29*th April* 1958

Letter dated 29th April 1958 addressed by Mr. Francis Hemming to the President of the International Commission on Zoological Nomenclature, intimating his decision to relinquish the Office of Secretary on medical advice

My dear President,

The Secretaryship of the Commission

It is with great regret that I have to report to you that about a fortnight ago my medical advisers informed me that I ought to seek immediate relief from at least the greater part of my duties as Honorary Secretary to the International Commission and that I must not incur the strain involved in completing the arrangements for the Colloquium on Zoological Nomenclature which is to be held in London next July immediately before the opening of the Fifteenth International Congress of Zoology.

For some years I have, as you are aware, been considering the question of relinquishing the Office of Honorary Secretary to the International Commission on Zoological Nomenclature which I have held for over twenty years. I have contemplated this step partly because I consider that I have held this Office for long enough and that a change would be advantageous and partly because I am anxious to be able to return to my studies on the Lepidoptera. It has always been my intention when I judged that the time had come to take this step to give you, as President, as long notice of my decision as was reasonably practicable in order that the members of the Commission, in conjunction with the International Trust, might concert the arrangements needed for carrying on the work of the Commission. I very much regret that in the light of the advice received from my doctors it has been necessary to adopt a much more rapid procedure than that previously proposed. As you will understand, this was inevitable if arrangements were to be made for an immediate transfer of responsibility for the day-to-day work of the Office of the Commission and for the completion of the arrangements for the coming Colloquium. For any break in the continuity of those arrangements and any delay

in their completion might seriously compromise the prospects of obtaining the final approval of the coming Congress for the text of the *Règles* as revised by the Paris (1948) and Copenhagen (1953) Congresses.

Accordingly, on receiving from my medical advisers the report referred to above I at once notified the International Trust, as the body responsible for the conduct of the administrative and business affairs of the Commission. At the same time I informed Sir Gavin de Beer as President of the coming Congress. I now enclose a copy of a statement which is being issued by the International Trust setting out the arrangements which it has made for carrying on the work of the Commission in the period lying immediately ahead. In doing so, I should like to make two observations. First, that the Commission is, in my view, most fortunate to have obtained the services of Mr. R. V. Melville, who is well known as a palaeontologist, is interested in nomenclature, took an active part in the Colloquium at Copenhagen in 1953 and is thus personally acquainted with many of those who will be attending the London meetings. The sincere gratitude of the Commission and the Congress is due to the British authorities for having released Mr. Melville and for the speed with which they have made his services available. Second, the appointment of Mr. Melville, being on the administrative plane and for a limited period only, in no way prejudices the nature of the decisions to be taken by the Commission and the Trust as to the future form of organisation to be adopted.

In order to minimise any inconvenience which my state of health may cause to the Commission, I have accepted a suggestion made to me by the Trust that it would be better that instead of at once tendering my resignation of the Office of Secretary to the Commission I should retain that Office until the close of the coming Congress but that in the meantime I should delegate to Mr. Melville almost all my functions as Secretary other than those which I have already specified. During this brief period I propose to hold myself at Mr. Melville's disposal to assist him in any way that he may ask me so to do. In this connection I have to recall that I am a member of that portion of the Commission—one third of the whole—whose term of service expires at the close of the coming Congress, my term of service expiring at the same date. As regards the question of re-

election as a member of the Commission I am in the hands of my colleagues. I can only say that I should be willing to serve for a further term if that were the wish of the Commission. Turning however to the question of the Secretaryship of the Commission, I have to inform you, my dear President, that I feel precluded on grounds of health from allowing myself to be nominated for a further term. Accordingly, as from the close of the London Congress I shall cease to be Secretary to the Commission.

I am sorry that the time has come when I must lay down the Office of Honorary Secretary which I have held for the last twenty-two years. While during that period I have not been able to carry into effect all the projects which I set myself, it is a matter of satisfaction to me that as the result of the policies pursued since I became Secretary, the Commission, instead of being a body without income, assets or reserves, today—through the action of the International Trust—has an impressive record of achievement amounting to between thirty and forty volumes of the *Bulletin of Zoological Nomenclature* and *Opinions and Declarations* Series, is in possession of substantial reserves and other assets, and, if it maintains the level of output of recent years, may count upon securing an income which will enable the Trust to defray the cost of an organisation sufficiently large to meet the needs of the Commission now that for the first time the whole of that cost will fall upon its funds.

In now saying good-bye, I take the opportunity of expressing my warm gratitude to all those members of the Commission who have assisted me with advice or in other ways during my term of service as Secretary and through you, my dear President, of conveying my sincere good wishes to the Commission and of expressing the hope that it may be enabled to make further valuable contributions to international co-operation by the promotion of stability and universality in zoological nomenclature.

I am sending a copy of this letter to each of the members of the International Commission.

Yours sincerely,

FRANCIS HEMMING

Letter dated 10th May 1958 by Professor J. Chester Bradley acknowledging the receipt of Mr. Francis Hemming's letter of 29th April 1958

Dear Secretary Hemming,

The content of your letter of 29th April (I.T.Z.N.42) was a shock and gave me sorrow. I recall your expressed desire to lay down the secretaryship in good time in order to be free to conduct your own researches, but I deeply regret that ill-health should now force inactivity at a moment when, I am sure, nothing could be farther from your desire.

I am sure that I speak for the entire Commission when I recall the twenty-two years in which you have strenuously laboured, bringing the affairs of the Commission from a virtual standstill to the status of a thriving service to zoologists, when I recall your personal sacrifices, your indomitable energy, your extraordinary efficiency, your clear and logical mind that you have continually exercised in furthering the technical work of the Commission, when I say that we owe you a debt of gratitude greater than I am able to put into words.

As President of the Commission I express to you its particular gratitude for your promptness in securing a competent acting successor, able to step in immediately and prevent the collapse of arrangements for the Colloquium and to carry on during a transition period. For this, I ask you to convey the thanks of the Commission to the Trust, to Sir Gavin de Beer, to Sir William Pugh, and last, but not least, to Mr. Melville himself. In wishing you a formal good-bye, although I shall hope to see you in London, I recall our long years of pleasant association in nomenclatural matters, dating back to the autumn of 1928 when I was invited, as a guest, to attend meetings of the Committee on Nomenclature for British entomology. As men of spirit, we have had our different points of view, but they have always been harmoniously resolved, and I am confident

that we have continuously held one another in mutual respect and esteem.

In closing, may I hope that your ill-health will be temporary, and that it will not interfere with your chosen research, and that you may face many more years of active and productive scientific life.

Yours cordially,

J. CHESTER BRADLEY

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pp. 1—48

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- 6 JAN 1958

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the International Commission on Zoological Nomenclature

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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

A. The Officers of the Commission

Honorary Life President: Dr. Karl JORDAN (*British Museum (Natural History), Zoological Museum, Tring, Herts, England*)

President: Professor James Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (12th August 1953)

Vice-President: Senhor Dr. Afranio do AMARAL (*Sao Paulo, Brazil*) (12th August 1953)

Secretary: Mr. Francis HEMMING (*London, England*) (27th July 1948)

B. The Members of the Commission

(Arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology)

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947)

Senor Dr. Angel CABRERA (*La Plata, Argentina*) (27th July 1948)

Mr. Francis HEMMING (*London, England*) (27th July 1948) (*Secretary*)

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948)

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950)

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950)

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950)

Professor Dr. Tadeusz JACZEWSKI (*Institute of Zoology, Polish Academy of Sciences, Warsaw, Poland*) (15th June 1950)

Professor Dr. Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a.M., Germany*) (5th July 1950)

Professor Dr. Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950)

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (12th August 1953) (*Vice-President*)

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (12th August 1953)

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (12th August 1953) (*President*)

Professor Harold E. VOKES (*University of Tulane, Department of Geology, New Orleans, Louisiana, U.S.A.*) (12th August 1953)

Professor Béla HANKÓ (*Mezőgazdasági Muzeum, Budapest, Hungary*) (12th August 1953)

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (12th August 1953)

Mr. P. C. SYLVESTER-BRADLEY (*Sheffield University, Sheffield, England*) (12th August 1953)

Dr. L. B. HOLTHUIS (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (12th August 1953)

Dr. K. H. L. KEY (*Commonwealth Scientific and Industrial Research Organisation, Canberra, A.C.T., Australia*) (15th October 1954)

Dr. Alden H. MILLER (*Museum of Vertebrate Zoology, University of California, Berkeley, California, U.S.A.*) (29th October 1954)

Doc. Dr. Ferdinand PRANTL (*Národní Museum v Praze, Prague, Czechoslovakia*) (30th October 1954)

Professor Dr. Wilhelm KÜHNELT (*Zoologisches Institut der Universität, Vienna, Austria*) (6th November 1954)

Professor F. S. BODENHEIMER (*The Hebrew University, Jerusalem, Israel*) (11th November 1954)

Professor Ernst MAYR (*Museum of Comparative Zoology at Harvard College, Cambridge, Massachusetts, U.S.A.*) (4th December 1954)

Professor Enrico TORTONESE (*Museo di Storia Naturale "G. Doria", Genova, Italy*) (16th December 1954)

BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 16, Part 1 (pp. 1—48) 30th December 1957

PURCHASED

Karl P. Schmidt

Readers of the *Bulletin of Zoological Nomenclature* will learn with the greatest regret of the sudden death on 26th September 1957 of Dr. Karl P. Schmidt, formerly Chief Curator of Zoology, Chicago Natural History Museum, at the age of 67.

Dr. Schmidt who was a world authority in the field of herpetology, was one of the most distinguished American zoologists of his day. In matters of nomenclature Dr. Schmidt had always been a keen advocate of stability for zoological names and was at all times willing to throw the weight of his influence in support of proposals designed to further this end. When in 1953 the Fourteenth International Congress of Zoology gave official approval to the concept of neotypes, Dr. Schmidt, jointly with Mr. Roger Conant, of Philadelphia, was, for example, the first zoologist to come forward with a request that the International Commission on Zoological Nomenclature should use its Plenary Powers to approve the designation of a neotype for the common North American snake, *Thamnophis sirtalis* (Linnaeus, 1768) (the Eastern Garter Snake of North America), the long-established name for which was thus protected from being changed.

At Copenhagen in 1953 Dr. Schmidt presided with great distinction over the Meetings of the Section on Nomenclature at the International Congress of Zoology and it was largely due to his quick understanding, firmness and good humour that the Section was enabled to reach agreement upon the large number of intricate—and, in some cases, potentially controversial—matters which it was called upon to consider.

At the time of his death Dr. Schmidt was planning to come to London in July of next year for the purpose of taking part in the Colloquium on Zoological Nomenclature which is to settle the terms of the revised text of the International Code of Zoological Nomenclature for submission to the Fifteenth International Congress of Zoology which is to meet immediately after the close of the Colloquium. Dr. Schmidt's sound

judgment and wise counsel will be sorely missed at these meetings. His tragic death as the result of a snake bite is a severe loss to his speciality and a painful blow to his many friends and admirers. The sympathy of all zoologists will go out to his widow and family.

FRANCIS HEMMING

11*th November* 1957

NOTICES PRESCRIBED BY THE INTERNATIONAL CONGRESS OF ZOOLOGY

The following notices are given in pursuance of decisions taken, on the recommendation of the International Commission on Zoological Nomenclature (see 1950, *Bull. zool. Nomencl.* **4** : 51—56, 57—59), by the Thirteenth International Congress of Zoology, Paris, July 1948 (see 1950, *Bull. zool. Nomencl.* **5** : 5—13, 131).

(*a*) Date of commencement by the International Commission on Zoological Nomenclature of voting on the application published in the " Bulletin of Zoological Nomenclature "

NOTICE is hereby given that normally the International Commission will start to vote upon applications published in the *Bulletin of Zoological Nomenclature* on the expiry of a period of six calendar months from the date of publication in the *Bulletin* of the applications in question. Any specialist who may desire to comment upon the application published in the present Part of the *Bulletin* is accordingly invited to do so in writing and in duplicate to the Secretary to the Commission, as quickly as possible and in any case, in sufficient time to enable the communication in question to reach the Secretariat of the Commission before the expiry of the six-month period referred to above.

(*b*) Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in a certain case

NOTICE is hereby given that the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers involved the application published in the present Part of the *Bulletin of Zoological Nomenclature* in relation to the under-mentioned names :—

Calandra (*Calendra*) Clairville & Schellenberg, 1798, suppression of, in favour of *Sphenophorus* and *Sitophilus*, both of Schoenherr, 1838, respectivly, in interests of universality of nomenclature ; *abreviatus* Fabricius, 1787 (*Curculio*) and *oryzae*, emendation to of *oryza* Linnaeus, 1763 (*Curculio*), validation of (Class Insecta, Order Coleoptera) (Z.N.(S.) 255).

2. Comments received in sufficient time will be published in the *Bulletin* ; other comments, provided that they are received within the prescribed period

of six calendar months from the date of publication of the present Part will be laid before the International Commission on Zoological Nomenclature at the time of commencement of voting on the application concerned.

3. In accordance with the procedure agreed upon at the Session held by the International Commission on Zoological Nomenclature in Paris in 1948 (see 1950, *Bull. zool. Nomencl.* **4** : 56), corresponding Notices have been sent to the serial publications *Nature* and *Science*.

FRANCIS HEMMING

Secretary to the International Commission on Zoological Nomenclature

28 Park Village East, Regent's Park,
London, N.W.1, England.

30th *December* 1957.

REPORT ON THE QUESTION OF THE APPLICATION OF THE GENERIC NAME "CALANDRA" CLAIRVILLE & SCHELLENBERG, 1798 (CLASS INSECTA, ORDER COLEOPTERA) AND MATTERS INCIDENTAL THERETO

Possible use of the Plenary Powers (a) either to suppress the generic name "Calandra" Clairville & Schellenberg, 1798, or in certain circumstances to validate the spelling "Calendra" therefor, (b) to validate the specific name "abbreviatus" Fabricius, 1787, as published in the combination "Curculio abbreviatus", as the name for the Corn Root Weevil, (c) to suppress the specific name "elegans" Fourcroy, 1785, as published in the combination "Curculio elegans" and (d) to validate the emendation to "oryzae" of the specific name "oryzae" as published in the combination "Curculio oryzae"

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Commission Reference : Z.N.(S.) 255)

Introductory

The primary purpose of the present Report is to place before the International Commission on Zoological Nomenclature the complicated and difficult problems associated with the generic name *Calandra*—or *Calendra*—Clairville & Schellenberg, 1798 (Class Insecta, Order Coleoptera), an extremely well-known name which in one or other of the above spellings has for many years been used —and still is used—for different species of weevil, each of great economic importance, by workers in the Old World and the New World respectively. A subsidiary question which is also involved is which of the above spellings, both of which were used by Clairville & Schellenberg in 1798, should be treated as being the Valid Original Spelling. There is a possibility that the determination of this latter question might in certain circumstances legitimately give rise to a request that on grounds of usage the spelling found to be the Invalid Original Spelling should be validated by the Commission under its Plenary Powers. It has to be noted that the specific name universally in use for the Corn Root Weevil (*Curculio abbreviatus* Fabricius, 1787) is an invalid name and will need either to be validated or replaced by some later name. Finally, it has been found that the specific name *oryzae* Linnaeus, 1763, as published in the combination *Curculio oryzae*, the specific name of the Rice Weevil, was first published in the defective form *oryza* and therefore that the use of the Plenary Powers will be required to validate the spelling *oryzae* currently in use for this important species.

2. The problems involved in the present case were first brought to the attention of the International Commission some forty years ago by the late Professor Carl Apstein of Berlin in a paper entitled " Nomina Concervanda " (1915, *SitzBer. Ges. naturforsch. Freunde Berlin* **1915** (No. 5) : 119–202) in which a long list of names were recommended for conservation in their then currently accepted sense, the request submitted in the present case (: 171) being that the Grain Weevil (*Curculio granarius* Linnaeus, 1758) should be declared to be the type species of the genus *Calandra* (so spelled). The Commission found itself unable to deal as a single unit with the enormous number of names brought forward by Professor Apstein but by the Ruling given in its *Opinion* 74 (1922, *Smithson. misc. Coll.* **73** (No. 1) : 32–34) intimated its willingness to consider any of the names in Professor Apstein's list " upon presentation of reasonably complete evidence ". In the present case no such application was subsequently submitted. In 1950, however, attention was again drawn to this case by the communication to the Office of the Commission by Professor Dr. H. Boschma (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) of a copy of a brief note entitled " Nomina Conservanda of Coleoptera 1 " (1950, *Ent. Ber.* **13** : 11–13) in which Dr. K. W. Dammerman of the same Museum had argued in favour of the adoption of the course previously recommended by Professor Apstein. Neither then nor later, however, did the late Dr. Dammerman submit an application to the Commission on this subject. In March 1956 this question arose in a more definite form in a communication addressed to the Office of the Commission by Mrs. Patricia Vaurie (*The American Museum of Natural History, New York*), in which she argued in favour of the settlement of this case in the opposite sense to that previously advocated by Professor Apstein and Dr. Dammerman, that is, she asked that the Commission should give a Ruling that the type species of this genus for which she used the spelling *Calendra*—was the Corn Root Weevil, *Curculio abbreviatus* Fabricius, 1787. It was Mrs. Vaurie's communication which led to the investigation described in the present Report.

3. In view of the economic importance of the species involved and the diametrically opposite opinions held by two large groups of workers as to which of the above species should be accepted as the type species of this genus, I took the view, as Secretary to the Commission, that this was a case where a canvass of opinion among interested specialists and institutions was desirable as a preliminary to the submission to the Commission of the issues involved. To this end a questionnaire was issued by the Office of the Commission on 4th May 1956. Full particulars of the individual specialists and institutions so consulted are given in Appendix 1 to the present Report, in which is given also the names of certain specialists who were consulted by recipients of the questionnaire and who later very kindly furnished statements of their views. The grateful thanks of the Commission are due to all those who co-operated in this preliminary survey of the problems involved in the present case.

4. Although, as has been explained, the major problem calling for decision is whether the Grain Weevil (*granarius*) or the Corn Root Weevil (*abbreviatus*)

should be accepted as the type species of the genus *Calandra* (or *Calendra*) Clairville & Schellenberg, it has been judged convenient to deal first in the present Report with the question as to which of the above spellings should be accepted as the Valid Original Spelling for this generic name. This question is accordingly dealt with in Part 1 of the present Report. Part 2 is devoted to the question of the species to be accepted as the type species of the above genus and to a discussion of possible solutions of the problem so involved. The views on this subject furnished by the consultant specialists in response to the questionnaire of 4th May 1956 are given in Appendix 2. Part 3 of the Report is concerned with the problem presented by the fact that the specific name (*abbreviatus* Fabricius, 1787) commonly used for the Corn Root Weevil is invalid as a junior homonym of an older and valid name for a different species which is also of importance in economic entomology. The advice furnished by specialists on this subject is given in Appendix 3. In Part 4 of the Report particulars are given in regard to various miscellaneous matters involved in the present case which it has been considered could be most conveniently grouped in this way. In the same Part is discussed the minor though unpleasant discovery that the specific name *oryzae* currently used for the Rice Weevil is not the oldest spelling for that name, it having been originally published with the spelling *oryza*. Finally, in Part 5 I have summarised the principal conclusions which I have reached as the result of the investigations described in the present Report. In Appendix 4 is given an outline of the action which would require to be taken if the Commission were to decide to take action on the lines advocated by the majority of the consultant specialists.

5. In order to simplify the ensuing discussion of the issues involved, the original references for the names and spellings of names which enter into the present case (other than those for names which are concerned only as junior homonyms of names directly affected, as to which see paragraph 40 of the present Report) are given below :—

(1) *Generic Names*

Calandra Clairville & Schellenberg, 1798, *Ent. helv.* **1** : pl. II

Calandra Fabricius (J. C.), 1801, *Syst. Eleuth.* **2** : 429

Calandra [Leach], [1815], *Edinb. Ency.* **9** : 106–109

Calendra Clairville & Schellenberg, 1798, *Ent. helv.* **1** : 62

Diaprepes Schoenherr, 1823, *Isis* (Oken) **1823** : 1140

Sitophilus Schoenherr, 1838, *Gen. Spec. Curcul.* **4**(2) : 967

Sphenophorus Schoenherr, 1838, *Gen. Spec. Curcul.* **4**(2) : 874

(2) *Specific Names*

abbreviatus, *Curculio*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 386

abbreviatus, *Curculio*, Fabricius (J.C.), 1787, *Mantissa Ins.* **1** : 99

brachypterus, Curculio, Gmelin (J.F.), [1790], *in* Linnaeus, *Syst. Nat.* (ed. 13) **1**(4) : 1741

brachypterus, Curculio, Olivier (A.G.), [1790], *Ency. méth.* **5** (Ins.) : 561

decurtatus, Curculio, Gmelin (J.F.), [1790], *in* Linnaeus, *Syst. Nat.* (ed. 13) **1**(4) : 1747

elegans, Curculio, Fourcroy (A.F.), 1785, *Ent. paris.* (1) : 118

granarius, Curculio, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 378

oryza, Curculio, Sherborn, 1902, *Index Anim.,* Pars prim. : 702

oryzae, Curculio, Linnaeus, 1763, *Amoen. acad.* **6** : 395

spengleri, Curculio (an Emendation of *sprengleri, Curculio,* Linnaeus, 1767)

sprengleri, Curculio, Linnaeus, 1767, *Syst. Nat.* (ed. 12) **1**(2) : 609

PART 1 : QUESTION OF THE RELATIVE STATUS OF THE SPELLINGS " CALANDRA " AND " CALENDRA " FOR THE GENERIC NAME PUBLISHED WITH BOTH SPELLINGS BY CLAIRVILLE & SCHELLENBERG IN 1798

6. The generic name with which the present Report is primarily concerned was published by Clairville & Schellenberg with two original spellings, namely:—

(a) The spelling " Calendra "

Used six times in the main text and once in the explanation to the figures

(b) The spelling " Calandra "

Not used at all in the text but used on Plate II, the plate on which the Grain Weevil and the Corn Root Weevil were figured.

7. The fact that both the above were original spellings was clearly brought out by Dammerman (1950 : 11) but that this was the case has not always been consistently realised, the " Calandra " spelling, for example, being omitted in Neave's *Nomenclator Zoologicus,* where in consequence the " Calendra " spelling appears as the only spelling used by Clairville & Schellenberg. In the correspondence following upon the issue of the questionnaire of 4th May 1956

(paragraph 4 above) this question was discussed by Mr. Balfour-Browne and Dr. Zimmerman in the following interesting passage :—

The spelling of " Calendra " versus " Calandra "

It appears not to be generally realised that Clairville wrote the text of *Entomologie Helvetique*, 1798, and that Schellenberg, a naturalist and artist, prepared most of the plates. Clairville explains this in volume 2 of the work, where he discusses the co-operative venture in preparing the publication, and he notes that Schellenberg died, leaving the figures to be completed by his son and others. Clairville used the spelling *Calendra* six times in the main text, and once in the separate explanation of the figures. Clairville published a list of errata in which spelling errors are corrected on the two pages of the French text containing *Calendra*, but there was no change made in the spelling of *Calendra*. Had Clairville considered his usage of *Calendra* incorrect, he would have made the change in the list of errata.

The only appearance of *Calandra* in the original work is on the engraved title of plate II which includes the two species in question. In no place is a binomial including *Calandra* to be found. It does not seem possible to ascertain who was responsible for the name on the plate, but we may assume that it belongs to Schellenberg who made the original drawing. However, if a different person engraved the plate, then the spelling *Calandra* may be the engraver's responsibility. We cannot accept the suggestion that the appearance of *Calandra* on the plate is an " emendation ".

We conclude that *Calendra* of Clairville is the original and correct spelling and that *Calandra* may be attributed to the artist Schellenberg. Sherborn, the noted bibliographer and scholar, in his *Index Animalium*, 1902, lists *Calendra* as the correct spelling and *Calandra* as an error.

Fabricius, in 1801 (*Syst. Eleuth.* 2 : 429) used *Calandra*, and others have followed Fabricius. Illiger, in 1804 (*Mag. Insektenkunde* 3 : 103), however, used *Calendra* and included *granaria* and *palmarum* (which are not now regarded as congeneric). Fabricius did not say that *Calendra* should be emended to *Calandra*, and there appears no way of discovering his reason for using *Calandra* instead of *Calendra*. On etymological grounds we fail to find that *Calandra* is more correct than *Calendra*. We do not agree that the change from *Calendra* to *Calandra* is supported by favourable evidence, and no author has stated that he was emending the spelling of the name. We favour the conclusion that *Calendra* has been derived from the Latin " calendra " and " celendra " from " cylindrus ", in reference to the shape of the insects.

8. Prior to the meeting at Copenhagen in 1953 of the Fourteenth International Congress of Zoology no means existed in the *Règles* for determining what was the correct spelling for a zoological name in those cases where a name was originally published with more than one spelling. In consequence, it was only possible for zoologists to treat such cases on the lines of the then-existing provisions in Article 19 in relation to the emendation of zoological names. In

such cases therefore zoologists found themselves embarked upon laborious discussions of the origin and meaning of the words in question. The situation in this regard was, however, completely altered by the drastic remodelling of Article 19 by the Copenhagen Congress, as the result of which the field within which names might legitimately be emended was severely curtailed. At the same time express provision was made in the *Règles* for determining which of two or more original spellings of a given name should be accepted as the valid Original Spelling. Under the decision so taken it was provided that, save in cases where there was clear evidence that one of the original spellings was the result of an inadvertent error or, where there were more than two original spellings, all those spellings except one were the result of inadvertent errors " the Valid Original Spelling is that one of the Original Spellings used by the First Reviser of the name " (1953, *Copenhagen Decisions zool. Nomencl.* : 43—44, Decision 71(1)(a)(i)).

9. In order to determine which is the Valid Original Spelling of the generic name with which we are here concerned, it is necessary under the Copenhagen Decision cited above, first, to ascertain whether the original publication contains clear evidence that either the spelling *Calendra* or the spelling *Calandra* was the result of an inadvertent error. The information furnished by Mr. Balfour-Browne and Dr. Zimmerman in the communication quoted in paragraph 7 above shows that in the present case it cannot be claimed that the original work contains any evidence—still less any clear evidence—that one of the above spellings is the result of an inadvertent error, for the book in question contains a " Corrigenda " section in which no reference was made to this name in either of its spellings. In these circumstances it is necessary now to ascertain who was the " First Subsequent User " of this name and what spelling was used by that author. From the information furnished by Mr. Balfour-Browne and Dr. Zimmerman we see (i) that the First Subsequent User of this generic name was Fabricius (J.C.) who so used it in 1801 (reference as given in paragraph 5 of the present Report) and (ii) that the spelling used by that author was the " a " spelling " Calandra ". Further, it appears that the same spelling was employed in the following year (1803, *Mag. f. Insektenk.* (Illiger) **3** : 103) by Illiger, in 1810 by Latreille (*Consid. gén. Anim. Crust. Arach. Ins.* : 225) and in 1815 by Leach *Edinburgh Ency.* **9** : 106—109). Thus it is clear not only that the " a " spelling *Calandra* was the spelling used by the First Subsequent User but also that this was the spelling used by leading specialists in the ensuing period up to the appearance of the great work by Schoenherr by whom also the " a " spelling was employed. In the light of the evidence collected on this subject it must be concluded that the definitive action in this matter was taken by Fabricius when in 1801 he used the " a " spelling *Calandra* and therefore that under the Copenhagen Decision quoted in paragraph 8 above that spelling is to be accepted as the Valid Original Spelling, the " e " spelling *Calendra* thus becoming an Invalid Original Spelling.

10. The present is the first occasion on which the Copenhagen Rule in regard to the determination of the Valid Original Spelling for a name published

with two or more spellings has been applied in the case of the generic name here under consideration. The result obtained by the application of this Rule is the opposite of that which might have been expected from the current literature where the " e " spelling *Calendra* is commonly treated as being the correct spelling, the " a " spelling *Calandra* being written of as being an emendation of that name introduced by Leach in 1815. That this should be the result of applying the Copenhagen Rule does not seem to present any serious difficulty in the present case, for both spellings are today in common use, though by different groups of workers, the " e " spelling *Calendra* being in use in North America and the " a " spelling *Calandra* in other parts of the world. Moreover, it seems reasonable to conclude from the available evidence on the subject of usage (paragraph 11 below) that the decision as to which of these spellings should be accepted will be settled ultimately not so much in the light of the Copenhagen Decision discussed above as in that of the view accepted as to the species to be treated as the type species of the genus in question. On this latter question reference is directed to paragraph 13 below.

11. On the question of the relative usage of the spellings *Calandra* and *Calendra* two comments of particular interest were received. These were the following :—

(a) Comment by J. Balfour-Browne and Elwood C. Zimmerman

(extract from a letter dated 25th May 1956)

. . . . . .

We have analysed the *Review of Applied Entomology* (which reviews the world economic literature) for the last 20 years and find that the name and spelling *Calandra* has been used on the largest number of occasions—on about 110 occasions out of about 141 in which the Grain Weevil was mentioned. On only four occasions were the Corn Root Weevils mentioned, and on each occasion the name and spelling *Calendra* was used.

We do not believe, however, that the usage of any name during the past 20 years or more in applied entomology is necessarily the correct usage. Many names which have been used in literature for long periods of time are used in error, and the number of times a name appears in literature is no absolute index to its correctness.

. . . . . .

Current usage of *Calendra*, *Calandra*, *Sitophilus* and *Sphenophorus* :— Since the Pierce report in 1925, *Sitophilus* and *Calendra* have come into general use in America. In Europe, *Calandra* has been used by most workers, possibly

because the *Review of Applied Entomology* adopted *Calandra* in editorial policy. However, the world catalogue of beetles, Junk's *Coleopterorum Catalogus*, uses *Sitophilus* for the grain weevil and *Calandra* for the corn root weevils, or *Sphenophorus*. Various authors have followed the catalogue. In 1871, Gemminger and Harold's world catalogue of Coleoptera used *Sphenophorus* for the root weevils, and *Calandra* is used for the grain weevils. In the Kloet and Hinck 1945 *Check List of British Insects*, *Sitophilus* is used for the grain weevils. In 1920, the Leng catalogue of American Coleoptera north of Mexico, used *Calendra* for the grain weevils and *Sphenophorus* for the root weevils, but in the 1927 supplement, *Calendra* replaces *Sphenophorus* and *Sitophilus* replaces *Calendra*, following Pierce, 1925. The same usage is given by Blackwelder, 1947, in his catalogue of the Coleoptera of America south of the United States. Vaurie, who has recently (1951) monographed the American *Sphenophorus*, assigns them to *Calendra*.

(b) Comment by W. J. Hall

(*Director, Commonwealth Institute of Entomology, London*)

(extract from a letter dated 29th June 1956)

. . . . . .

I feel that the spelling *Calandra* versus *Calendra* is of importance if the Commission adopts the proposed solution (a) or (b).[1] If the Commission adopts the American proposal (a), it should also rule for the spelling *Calendra* as this is the spelling always used by those who use the genus for the Corn Root Weevil. If, however, the Commission adopts the European proposal (b), it should also adopt *Calandra*, as this is the spelling always used by those who use the genus for the Grain Weevil.

12. The remaining answers to the questionnaire issued in May 1956 did not throw much light on the question of the relative merits of the spellings *Calandra* and *Calendra*. Of the total of twenty-eight specialists who replied to the questionnaire eleven (11) supported the "e" spelling *Calendra*, eight (8) supported the "a" spelling *Calandra*, one (1) expressed the view that the decision should turn on whether the Commission approved the American or European practice as regards this name (see Dr. Hall's letter reproduced in paragraph 11(b) above. The eight (8) other specialists expressed no opinion on this question. The particulars given above cannot be regarded as giving any significant guidance, for, as anticipated by Dr. Hall in the letter referred to above, the spelling used for this generic name was in most cases directly correlated with the view held by the specialist concerned as to the species which should be accepted as the type species of the genus in question.

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[1] For the text of the portion of the Questionnaire here referred to see paragraph 22 of the present Report.

13. To sum up, it seems reasonable to draw the following conclusions as regards this part of the subject :—

(a) If the name *Calandra* or its variant spelling *Calendra* is to be retained as the valid name for one or other of the genera of weevils concerned :—

(i) The Valid Original Spelling *Calandra* should be suppressed under the Plenary Powers in favour of the spelling *Calendra* if the Commission were to decide in favour of accepting *Curculio abbreviatus* Fabricius (the Corn Root Weevil) as the type species of that genus, this being the spelling used by all workers who accept that species as the type species.

(ii) The Valid Original Spelling *Calandra* should be retained if the Commission were to decide in favour of using its Plenary Powers to designate the Grain Weevil, *Curculio granarius* Linnaeus, to be the type species of this genus, this being the spelling always used by workers who accept that species as the type species.

(b) If the Commission were to decide in favour of the compromise proposal discussed in paragraphs 21 and 22 of the present Report, i.e. if it were to decide in favour of using its Plenary Powers to suppress the above generic name, thus leaving the names *Sphenophorus* and *Sitophilus* as the names for the two genera of weevils concerned :—

(i) the spelling to be so suppressed should be the Valid Original Spelling *Calandra* and that name, so suppressed, should then be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* ;

(ii) the spelling *Calendra*, being an Invalid Original Spelling and therefore under Decision 73(1) of the Copenhagen Congress a spelling devoid of status in zoological nomenclature, should also be placed on the foregoing *Official Index*.

PART 2 : THE QUESTION OF THE SPECIES TO BE ACCEPTED AS THE TYPE SPECIES OF THE GENUS " CALANDRA" CLAIRVILLE & SCHELLENBERG, 1798

14. We come now to the central issue involved in the present case, namely, the question of the species to be accepted as the type species of the genus *Calandra* (*Calendra*) Clairville & Schellenberg, 1798. Up to the year 1925 authors had for some ninety years followed the dispositions made by Schoenherr in 1838 and had adopted the generic name *Calandra* (in the " a " spelling)

for the Grain Weevil (*granarius*), placing the Corn Root Weevil (*abbreviatus*) in the genus *Sphenophorus* Schoenherr. This arrangement was based on the assumption that the first valid selection of a type species for the genus *Calandra* was that of *Curculio granarius* Linnaeus made by Leach in 1815 (*Edinb. Ency.* **9** : 106–109). In 1925, however, Pierce (*Proc. ent. Soc. Wash.* **27** : 113–114) pointed out that in 1810 (*Consid. gén. Anim. Crust. Arach. Ins.* : 431, 225) Latreille had selected the Corn Root Weevil (*Curculio abbreviatus* Fabricius) to be the type species of this genus, for the name of which Pierce then adopted the " e " spelling *Calendra*. Pierce took the view that, as this was the first occasion on which any of the originally included nominal species had been selected as the type species of *Calendra*, Latreille's action was valid and therefore that under the *Règles* the Corn Root Weevil was the true type species of this genus. Pierce accordingly transferred the Corn Root Weevil (*Curculio abbreviatus* Fabricius) to the genus *Calendra* Clairville & Schellenberg, at the same time sinking the name *Sphenophorus* Schoenherr, 1838, as a junior objective synonym of *Calendra*. The Grain Weevil (*Curculio granarius* Linnaeus), which was thus dispossessed of the generic name *Calandra* (the spelling previously used for this name), was thereupon placed in the genus *Sitophilus* Schoenherr, 1838, with the type species of which (*Curculio oryzae* Linnaeus, 1763)[2] it was considered to be congeneric.

15. The drastic overturning of long-established practice implicit in Pierce's conclusions inevitably created great confusion at the time. He was, however, followed by workers in North America and later by Csiki in the influential *Coleopterorum Catalogus* published by Junk. At the present time all workers in North America accept *Curculio abbreviatus* Fabricius, 1787, as the type species of this genus and use the " e " spelling *Calendra* for this generic name.

16. On the other hand, workers outside North America rejected Pierce's conclusions and still do so, these workers continuing to use the " a " spelling *Calandra* for this generic name and treating *Curculio granarius* Linnaeus, 1758, as the type species of the genus so named. The specialists who hold this view reject as invalid the selection by Latreille (1810) of *Curculio abbreviatus* Fabricius as the type species of the genus *Calandra* Clairville & Schellenberg and continue to base their treatment of this genus upon the action of Leach in 1815 in designating *Curculio granarius* as the type species.

17. Two arguments have been advanced against the acceptance of Latreille's (1810) type selection. The first of these arguments never possessed any validity and can be quickly dismissed. Under this argument it was held that in the " Tableau Méthodique " annexed to the *Considérations générales* Latreille did no more than indicate " typical " or representative species for the genera there enumerated and therefore that the indications so given ought not to be accepted as constituting valid type selections under Article 30 for the genera

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[2] As explained in paragraph 36 below, this name was originally published in the defective spelling "*oryza*".

concerned. If this were a matter which could be debated in isolation, the argument advanced above might well appear to be strong, but already before the time of Pierce's paper this matter had been settled in the opposite sense by the Ruling given by the Commission in its *Opinion* 11 (1910, *Smithson. Publ.* **1938** : 17–18) which directed that the entries in the "Tableau Méthodique' were to be accepted as type selections for the genera concerned. In 1939 the above Ruling was confirmed and amplified in *Opinion* 136.

18. The principal argument advanced against the acceptance of Latreille's (1810) selection of *Curculio abbreviatus* Fabricius, 1787, as the type species of *Calandra* Clairville & Schellenberg was that, while it was true that those authors had cited the nominal species *Curculio abbreviatus* Fabricius as belonging to their genus *Calandra* (*Calendra*), they had in fact misidentified the Fabrician species. In this connection, for example, Mr. Balfour-Browne and Dr. Zimmerman in the statement dated 25th May 1956 (to which reference has already been made) wrote as follows : "Clairville, who included an *abbreviatus* ascribed to Fabricius and described and figured it in his work, evidently misidentified the species, and it is really *striatopunctata* Goeze, 1777, according to some authorities (see *Coleopterorum Catalogus*)." The argument described above rests upon the assumption that it is permissible and indeed necessary in cases of the foregoing kind to take account of the taxonomic ideas believed to have been held by an author when establishing a nominal genus rather than to have regard only to the nominal species placed by him in the genus so established. This is a subject which exercised the minds of zoologists for many years, European workers for the most part taking the view described above, American workers on the other hand holding that stability in nomenclature would never be obtainable if it were permissible to take account of subjective taxonomic ideas about the intentions, as contrasted with the published statements of the original authors of particular names and that the only safe procedure, because the only procedure based upon objective nomenclatorial facts, was to assume that authors establishing nominal genera—and also authors selecting type species for previously established nominal genera—correctly identified the nominal species which they cited. This matter was settled in 1948 by the Thirteenth International Congress of Zoology (1950, *Bull. zool. Nomencl.* **4** : 158–159) when it inserted in the *Règles* a provision based on the objective standard described above, at the same time making special provision however for the treatment by the Commission of cases where it could be shown that a given genus was based upon a misidentified type species and that the application of the rule described above would lead to a disturbance of current practice. We see therefore that under the foregoing decision it is to be concluded —unless the Commission were to direct otherwise—(a) that Clairville & Schellenberg correctly identified *Curculio abbreviatus* Fabricius when they placed that species in their new genus *Calandra*, (b) that Latreille also correctly identified that species when he selected it as the type species of *Calandra* and therefore (c) that, as Latreille's selection of that species to be the type species, being the first type selection to be made for this genus, is valid and that *Curculio abbreviatus*

Fabricius is, as Pierce argued, the valid type species of *Calandra* (*Calendra*) Claireville & Schellenberg.

19. In view of the economic importance of the species contending for the place of type species of the genus *Calandra* Clairville & Schellenberg, it was evident, when this matter was considered in the Office of the Commission in 1956, that the Commission would need exceptionally full documentation regarding the wishes of interested specialists before reaching a decision on the major issue involved, namely, (1) whether the normal provisions of the *Règles* should be applied in this case, thus involving the acceptance of the Corn Root Weevil (*Curculio abbreviatus* Fabricius, 1787) as the type species, or (2) whether the Plenary Powers should be used to set aside Latreille's selection of the above species as type species and in its place to designate the Grain Weevil (*Curculio granarius* Linnaeus, 1758) to be the type species of the genus *Calandra*. It was for this reason that, as Secretary, I took the view that the best course would be to take the canvass of interested specialists to which reference has been made in paragraph 3 of the present Report. It seemed clear also, however, that while such a canvass would be illuminating as providing an expression of the views of leading specialists, it would be unlikely to provide the Commission with any clear guidance as to the action which it was desirable that it should take, for in view of the deep-seated and long-standing difference of opinion among specialists as to which of the species discussed above should be accepted as the type species of the genus *Calandra*, it was to be expected that the specialists concerned would naturally advocate the official acceptance of their own interpretation of the genus *Calandra*, unless some alternative solution of a compromise character were at the same time to be placed before them for consideration.

20. In considering this matter I was greatly impressed by the marked similarity between the present case and that presented by the generic name *Colymbus* Linnaeus, 1758 (Class Aves), which had recently been the subject of consideration by the International Commission. In that case ornithologists themselves after fruitless discussions which had lasted for more than sixty years, took the initiative in proposing a compromise solution based upon a proposal submitted by Dr. Finn Salomonsen (*Copenhagen*) to the Tenth International Ornithological Congress when it met at Uppsala in 1950. The basis of the solution so recommended was that the Commission should use its Plenary Powers to suppress the name *Colymbus* Linnaeus, 1758, on the ground that owing to the long-standing divergence of practice among ornithologists this name had become so severely compromised that its continued use could lead only to further confusion. The second portion of the plan submitted provided for the recognition for the Grebes of the generic name *Podiceps* Latham, 1787 (the name hitherto used for this genus by the European workers) and for the Divers (or Loons) of the generic name *Gavia* Forster, 1788 (the name hitherto used for this group by the American ornithologists). It will be seen that under this plan both sides were required to give up the name *Colymbus*,

but each was able to retain for one of the genera concerned the generic name which it had been in the habit of using. This proposal was unanimously approved by the Commission whose decision on this subject has been embodied in *Opinion* 491 (1956, *Ops. Decls. int. Comm. zool. Nomencl.* **13** : 1–64).

21. It seemed to me at the time when the questionnaire regarding the present case was in preparation that perhaps a compromise solution on the *Colymbus* lines might usefully be adopted in the very similar case of the generic name *Calandra*. Such a solution, by eliminating the name *Calandra* altogether, would avoid the serious confusion which at least for some time would be inevitable either if the Commission were to give a Ruling that *Curculio abbreviatus* Fabricius (the Corn Root Weevil) be accepted as the type species of *Calandra* Clairville & Schellenberg or if it were to use its Plenary Powers to designate *Curculio granarius* Linnaeus, 1758 (the Grain Weevil) to be the type species of that genus. Under such a solution the specialists on each side would, as in the *Colymbus* case, give up one of the generic names which they had been in the habit of using, while retaining the other : American specialists would still be able to use the name *Sitophilus* Schoenherr for the Grain Weevil (*granarius*) but would in future have to use *Sphenophorus* Schoenherr (instead of *Calendra*) for the Corn Root Weevil ; European and other non-American specialists would still be able to use the name *Sphenophorus* Schoenherr for the above species but would in future have to use the name *Sitophilus* Schoenherr (instead of *Calandra*) for the Grain Weevil (*granarius*). Such a solution would thus involve some sacrifice on the part of each group of workers. It would, however, serve two valuable purposes : First, it would put an end to the confusion arising from conflicting usage of the name *Calandra* (*Calendra*) which, as in the case of the name *Colymbus*, had been so severely compromised in this way as to lose any practical value ; second, it would provide the two genera of weevils concerned with generic names which were well understood and as to the interpretation of which there was no doubt.

22. For these reasons, I decided when considering the approach to be made to specialists for advice on the *Calandra* (*Calendra*) problem, to include in the proposed questionnaire a request for views not only as to the relative acceptability of the Corn Root Weevil (*abbreviatus*) and of the Grain Weevil (*granarius*) as the type species of the above genus, but also as to the acceptability of the compromise proposal outlined in the immediately preceding paragraph. Accordingly, in the concluding paragraph of the Questionnaire issued on 4th May 1956, the specialists to whom it was addressed were asked first to give particulars of the usage of the name *Calandra* (*Calendra*) in recent years and, second, to express an opinion as to the relative merits of the three possible solutions of the present case. The text of this second question was as follows :—

(2) Which of the following solutions of the present case would, in your opinion, be most likely to remove confusion and to restore stability

and uniformity in the nomenclature used for the two species of weevil concerned ?

(a) acceptance of *Calendra* (so spelled) for the Corn Root Weevil (*abbreviatus*) and of *Sitophilus* for the Grain Weevil (*granarius*) (the American practice) ;

(b) adoption of *Calandra* (so spelled) for the Grain Weevil (*granarius*) by the designation by the Commission of that species under its Plenary Powers to be the type species of the above genus and acceptance of *Sphenophorus* for the Corn Root Weevil (*abbreviatus*) (the European practice) ;

(c) suppression of the name *Calandra* (*Calendra*) by the Commission under its Plenary Powers and adoption of *Sphenophorus* for the Corn Root Weevil (*abbreviatus*) and of *Sitophilus* for the Grain Weevil (*granarius*) (the compromise plan now put forward for consideration).

23. The foregoing questionnaire elicited the views of twenty-eight specialists. The comments so received may be summarised as follows :—

Summary of replies to Questionnaire

Solution	*Number of specialists in favour of Solution specified in Col.* (1)
(1)	(2)
Solution (a) (acceptance of *Calendra* (so spelled) with the Corn Root Weevil (*abbreviatus*) as type species)	2
Solution (b) (use of the Plenary Powers to designate the Grain Weevil (*granarius*) as type species of *Calandra* (so spelled))	10*
Solution (c) (suppression of *Calandra* (*Calendra*) under the Plenary Powers and acceptance of *Sphenophorus* for the Corn Root Weevil (*abbreviatus*) and *Sitophilus* for the Grain Weevil (*granarius*))	16
	28

* Some of the advocates of this Solution took the view that the Grain Weevil (*granarius*) is already the type species of *Calandra* and therefore that the use of the Plenary Powers would not be needed to secure the solution which they favour.

The replies summarised above are given in Parts 1, 2 and 3 of Appendix 2 of the present Report.

24. It will be seen from the particulars given in the preceding paragraph that the number of specialists who supported the adoption of the compromise solution represented by the suppression under the Plenary Powers of the name *Calandra* (*Calendra*) and the acceptance of the names *Sphenophorus* and *Sitophilus* for the two genera of weevils concerned exceeded in number the advocates of the two other solutions when added together.

PART 3 : QUESTION OF THE STATUS TO BE ACCORDED TO THE SPECIFIC NAME "ABBREVIATUS" FABRICIUS, 1787, AS PUBLISHED IN THE COMBINATION "CURCULIO ABBREVIATUS", THE NAME CURRENTLY APPLIED TO THE CORN ROOT WEEVIL BUT NOW FOUND TO BE INVALID AS A JUNIOR HOMONYM OF AN OLDER NAME

25. It is necessary now to consider a new and extremely unfortunate difficulty which was brought to attention in a letter dated 28th May 1956, in which Miss Rose Ella Warner (*U.S. Department, Agricultural Research Service, Entomology Research Branch, Washington, D.C., U.S.A.*) pointed out that, although the specific name *abbreviatus* Fabricius, 1787, as published in the combination *Curculio abbreviatus*, is universally used as the specific name for the Corn Root Weevil, that name is in fact invalid, being a junior homonym of the same name as published as the name for another species by Linnaeus in 1758.

26. Where, as in the present case, a well-known and strongly entrenched specific name is found to be invalid as a junior homonym of some older name, the practice has been to examine the situation so disclosed from two points of view, namely :—(a) to consider, in conjunction with interested specialists, whether it would be practicable for the Commission to use its Plenary Powers to suppress the senior homonym, thereby validating the specific name in common use ; (b) if it is found that the senior homonym is itself a name in general use and therefore that it would be impracticable for the Commission to suppress it, to ascertain what is the oldest available synonym by which the species at present known by the name which is invalid as a junior homonym could in future be known. These problems were investigated immediately upon the discovery of the difficulty described above.

27. The following specialists were consulted in regard to the foregoing questions and/or were brought into consultation by specialists who were so consulted :—

E. M. Hering (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*)

Sir Guy Marshall (*Commonwealth Institute of Entomology, London*)

Elwood C. Zimmerman (*Newton Center, Massachusetts, U.S.A.*)

W. J. Hall
E. O. Pearson
R. D. Pope
H. S. Bushell
(*Commonwealth Institute of Entomology, London*)

J. Balfour-Browne (*British Museum (Natural History), London*)

Teiso Esaki (*Kyushu University, Fukuoka, Japan*)

Eduard Voss (*Osnabruck, Germany*)

28. From the information received from the foregoing specialists it is clear that it would be quite impracticable—and wrong—to consider further the possibility of asking the International Commission to use its Plenary Powers for the purpose of suppressing the specific name *abbreviatus* Linnaeus, 1758, as published in the combination *Curculio abbreviatus*. For the species so named is a well-known species occurring in the West Indies where its larvae are pests of sugar cane and other crops. This species is moreover currently regarded as being—from the taxonomic point of view—the type species of the genus *Diaprepes* Schoenherr, 1826, through the subjective synonymisation by specialists of its specific name with that of the type species of that genus. (As part of any comprehensive solution of the present case both the generic name *Diaprepes* Schoenherr and the specific name *abbreviatus* Linnaeus, 1758, should be placed on the appropriate *Official Lists*. In the case of the first of these names there are, however, certain subsidiary problems calling for consideration. These are discussed below in paragraphs 38 and 39 of the present Report.)

29. As regards the second of the questions now to be considered, the following information has been received from the specialist consultants :—

(a) There is a name *Curculio elegans* Fourcroy, 1785, which by some authors has been identified as representing the Corn Root Weevil but by most has been regarded as a *nomen dubium*. This name is not in use and clearly stability in nomenclature would be seriously compromised if at this stage a fresh attempt were to be made to apply it to such an important species as the Corn Root Weevil. It has, however, two years' priority over the name *abbreviatus* Fabricius, 1787, and more over any other name published for that species. It is clear therefore that, whether the name *abbreviatus* Fabricius is now to be rejected or alternatively to be validated by the Commission the name *elegans* Fourcroy, 1785, should be deprived of further power to cause mischief by being suppressed for the purposes of the Law of Priority.

(b) The next name to be considered is *Curculio decurtatus* Gmelin, [1790]. This name is a direct *nom. nov.* for *Curculio abbreviatus* Fabricius, 1787. It is an available name in the sense that it is not a junior homonym of any older name.

(c) In the same work as that in which the specific name *decurtatus* was first published but on an earlier page Gmelin published a description of a nominal species, to which he applied the name *Curculio brachypterus*. This name is not in use, being regarded by specialists as a junior subjective synonym of *Curculio abbreviatus* Fabricius, 1787. So far as I have been able to ascertain, no First Reviser selection as between the specific names *decurtatus* Gmelin and *brachypterus* Gmelin as being names published in the same work and on the same date, has ever been made, no doubt because till now both names have been discarded as junior synonyms of *abbreviatus* Fabricius, 1787. In view of the fact that that name, unless validated by the Commission, will have to be abandoned, the question of the relative precedence to be accorded to the specific names *decurtatus* Gmelin, [1790], and *brachypterus* Gmelin, [1790] becomes one of practical importance, for one or other of these names would then become the oldest specific name for the Corn Root Weevil. The first of these names possesses obvious advantages over the second, because it represents a taxon objectively identical with *abbreviatus* Fabricius (having been proposed as a *nom. nov.* for that name), whereas the name *brachypterus* Gmelin represents a taxon which is only subjectively identified with *abbreviatus* Fabricius. Accordingly, in order to dispose of this minor problem, I take this opportunity, as First Reviser, to select under the procedure prescribed by the Copenhagen Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 66, Decision 123) the name *Curculio decurtatus* Gmelin, [1790], to take precedence over the name *Curculio brachypterus* Gmelin, [1790], these being names published in the same book and on the same date.

(d) Finally, it must be noted that the name *Curculio brachypterus* is sometimes cited as having first been published by Olivier (A.G.) in Volume 5 of the *Ency. méth.* This, however, is incorrect, for Olivier cited the reference to Gmelin and clearly used this name not as a new name of his own but as a name already published by Gmelin.

30. Of the nine specialists who have commented on this part of the present case seven have expressed the view that in the exceptional circumstances and having regard to the economic importance of the species involved (the Corn Root Weevil), the proper course would be to validate the specific name *abbreviatus* Fabricius, 1787, as published in the combination *Curculio abbreviatus* for the above species without at the same time invalidating its senior homonym *abbreviatus* Linnaeus, 1758, as published in the same combination. The specialists who have offered this advice are, in the order in which

they communicated their views to the Office of the Commission, the following : E. M. Hering ; Sir Guy Marshall ; W. J. Hall ; E. O. Pearson ; R. D. Pope ; H. S. Bushell ; E. Voss. The two other specialists who offered advice on this subject (J. Balfour-Browne ; E. C. Zimmermann) originally took the same view but later indicated that on balance they considered that it would be better to apply the normal provisions of the *Règles* in this case by rejecting the specific name *abbreviatus* Fabricius, 1787, and in future applying to the Corn Root Weevil the specific name *decurtatus* Gmelin, [1790], as published in the combination *Curculio decurtatus*. The communications received in regard to this matter are reproduced in Appendix 3 to the present Report.

31. It will be seen from the documents referred to above that there is virtual unanimity among the consultant specialists that in view of the economic importance of the Corn Root Weevil, the course which it is desirable that the International Commission should take is that it should use its Plenary Powers to validate the specific name *abbreviatus* Fabricius, 1787, as published in the combination *Curculio abbreviatus*, for use for the Corn Root Weevil, without those Powers being used at the same time to suppress the senior homonym *abbreviatus* Linnaeus, 1758, as published in the same combination, the valid name for the West India Sugar Cane Weevil. It is recognised that such a use of the Plenary Powers would be somewhat unusual, but in view of the fact that the Corn Root Weevil is currently placed by all specialists either in the genus *Calendra* (so spelled) or in the genus *Sphenophorus*, while the West India Sugar Cane Weevil is accepted as the type species of the genus *Diaprepes*, no serious risk of confusion would be involved if these two homonyms (*abbreviatus* Fabricius and *abbreviatus* Linnaeus) were both to become valid names. Such action would certainly fall within the ambit of the Plenary Powers, those Powers having been granted to the Commission by the International Congresses of Zoology without reservation as to their scope.

PART 4 : CERTAIN MISCELLANEOUS MATTERS

32. The present Part is concerned with four miscellaneous matters which require to be considered in connection with the present case. These are : (a) the family-group-name problems arising in connection with the generic name *Calandra* (and its variant spelling *Calendra*) ; (b) the question of the correct spelling of the specific name of the type species of the genus *Sitophilus* Schoenherr, 1838 ; (c) certain problems which have come to light in connection with the specific name of the type species of the genus *Diaprepes* Schoenherr, 1826 ; (d) the names which under the " Completeness-of-Opinions " Rule will require to be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* by reason of being junior homonyms of names directly involved in the present case.

(a) Family-Group-Name Problems

33. The generic name published by Clairville & Schellenberg both as *Calandra* and as *Calendra* has been taken as a base for a family-group name in both these spellings. The original references are as follows :—

CALANDRIDES Schoenherr, 1837, *Gen. Spec. Curcul.* 4(2) : 790

CALENDRINAE Leng (C.W.), 1920, *Cat. Col. Amer. N. of Mexico* : 335

34. The situation which will arise at the family-group-name level will depend upon the nature of the decision taken by the Commission at the generic-name level. If the Commission decides in favour of using its Plenary Powers to suppress the generic name *Calandra* (and consequently also its variant *Calendra*), i.e., if it approves the plan which, as explained in paragraph 23 above, has obtained more support than the two other plans added together, the family-group name based on the above generic name would be automatically suppressed also under the provisions of *Declaration* 20 (1955, *Ops. Decls. int. Comm. zool. Nomencl.* **10** : i—viii). If, however, the Commission were to accept the generic name *Calandra*, the valid name for the tribe based upon this generic name would be CALANDRINI (correction of CALANDRIDES) Schoenherr, 1837. If, in addition, the Commission were to use its Plenary Powers to validate the Invalid Original Spelling *Calendra*, the spelling of the tribe name would follow suit, that name becoming CALENDRINI (correction of CALANDRIDES) Schoenherr, 1837. The reason why in either case the name would be attributable to Schoenherr (1837) is that the name CALANDRIDES Schoenherr is the first name based upon the generic name *Calandra* to have been published and, as all names for taxa of the family-group are co-ordinate with one another, the oldest such name is the valid name, irrespective of the category in the family-group for which it was originally published or for which it is later employed.

(b) The question of the correct spelling of the specific name of the Rice Weevil

35. The genus *Sitophilus* Schoenherr, 1838, in which (as explained in paragraph 14 above) the Grain Weevil (*Curculio granarius* Linnaeus, 1758) is placed by specialists in North America, has as its type species the Rice Weevil by original designation by Schoenherr. This species was cited by Schoenherr under the name *Curculio oryzae* Linnaeus. It is by the specific name *oryzae* that this species is now universally known.

36. In the course of the checking of the original references for the names involved in the present Report it was found that Sherborn did not cite any species having the name *Curculio oryzae* but that he did cite a species under the name *Curculio oryza* Linnaeus, 1763 (Sherborn, 1902, *Index Anim.*, Pars prim. : 702). The reference given for this name was page 395 of volume 6 of

the first edition of the *Amoenitates Academicae* published in 1763, where, as stated by Sherborn, this specific name did appear in the grammatically defective form " *oryzae* ". That this was a *lapsus calami* or a misprint was recognised by Fabricius (J.C.) (*Syst. Ent.* : 134), who spelled the name as " *oryzae* " and actually attributed that spelling to Linnaeus. Further in the second edition of the *Amoenitates* (**6** : 395) published in 1789 the mistake committed in the first edition was corrected and the name was spelled in the correct way as " *oryzae* ". (It may be noted that in the second edition the letters " a " and " e " at the end of this word were printed as a digraph of so feebly constructed a type that the loop indicating the " e " portion was barely distinguishable as such, the digraph having the appearance superficially of a badly constructed letter " a ".)

37. After a continuous usage of the correct spelling " *oryzae* " for nearly two hundred years it would clearly be the height of pedantry—as well as being wholly contrary to the precept laid down in the Preamble of the *Règles* that stability in nomenclature be ensued—if that spelling were now to be abandoned in favour of the nomenclatorially valid but grammatically incorrect spelling " *oryza* ". Up to 1953 the emendation of the spelling " *oryza* " to " *oryzae* " could have been effected direct under Article 19 of the *Règles* but under the restrictions inserted in that Article by the Copenhagen Congress, it will be necessary for the Commission to use its Plenary Powers in order to validate the correct spelling " *oryzae* " and to prevent the disturbance in established practice which would otherwise be inevitable.

(c) The specific name for the type species of the genus " Diaprepes " Schoenherr, 1826

38. The point which has here to be considered is the spelling of the specific name for the type species of the genus *Diaprepes* Schoenherr, 1826, a name which, as explained in paragraph 28 of the present Report, enters into the present case by reason of the fact that its type species is currently identified with the nominal species *Curculio abbreviatus* Linnaeus, 1758. The name of the nominal species which (by original designation by Schoenherr) is the actual type species of the genus *Diaprepes* Schoenherr is *Curculio spengleri* Linnaeus, 1767. The point which has here to be noted is that this specific name, although intended to give honour to the naturalist L. Spengler, appeared in the defective form " sprengleri ", when first published by Linnaeus. Since Spengler's name (correctly spelled) was cited by Linnaeus in his description of this nominal species, it is evident that the spelling " sprengleri " was either a *lapsus calami* on the part of Linnaeus or was the result of a printers' error. It has been recognised as such by all subsequent workers by whom the spelling of this name has been amended to *spengleri* in accordance with the obvious intention of Linnaeus. From the particulars given above it will be seen that this is a case which falls within the scope of Article 19 of the *Règles* even in the

restricted form adopted for that Article by the Copenhagen Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 43—45, Decision 71), and therefore that the emendation of the defective spelling "*sprengleri*" to the correct form "*spengleri*" is permissible and indeed obligatory.

39. I accordingly recommend that, when, as part of the settlement of the present case, the generic name *Diaprepes* Schoenherr, 1826, is placed on the *Official List of Generic Names in Zoology*, its type species should be cited not as *Curculio sprengleri* Linnaeus, 1767, but as *Curculio spengleri* (emend. of *sprengleri*) Linnaeus, 1767. This specific name, being a junior subjective synonym of *abbreviatus* Linnaeus, 1758, as published in the combination *Curculio abbreviatus*, is not itself eligible for admission to the *Official List of Specific Names in Zoology*, it being the specific name *abbreviatus* Linnaeus which will require to be entered on that *List*. The Invalid Original Spelling *sprengleri* Linnaeus, 1767, as published in the combination *Curculio sprengleri*, should, however, be placed on the *Official Index of Rejected and Invalid Specific Names in Zoology*.

(d) Proposed addition of certain junior homonyms to the "Official Index of Rejected and Invalid Generic Names in Zoology"

40. Under the "Completeness-of-Opinions" Rule it is necessary to take account at this point of any generic names which by reason of being junior homonyms of generic names directly involved in the present case are objectively invalid. One of the names concerned (*Calandra* Bartram, 1791) has already been placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* (by the Ruling given in *Opinion* 447). The remaining names, which should also now be placed on the *Official Index*, are the following :—

(a) Junior homonyms of "Calandra" Clairville & Schellenberg, 1798

(i) *Calandra* Rafinesque, 1815, *Analyse Nature* : 68

(ii) *Calandra* Oken, 1817, *Isis* (Oken) **1817** : 1184

(iii) *Calandra* Brookes, 1830, *Mus. Brookes* : 93

(iv) *Calandra* Lesson, 1837, *Compl. Buffon* **8** : 120

(v) *Calandra* Gistl, 1848, *Nat. Thierr.* : 136

(b) Junior homonyms of "Sphenophorus" Schoenherr, 1838

(vi) *Sphenophorus* Newberry, 1890, *Monogr. U.S. geol. Surv.* **16** : 91

(vii) *Sphenophorus* Breitfuss, 1898, *Mém. Acad. Sci. St. Pétersb.* (8) **6** : 4, 5, 6, 8.

PART 5 : SUMMARY AND GENERAL CONCLUSION

41. Before setting out the conclusions which I have reached as the result of the investigations described in the present Report, I should explain (a) that, although (as noted in paragraph 2 of the present Report) the late Dr. Dammerman communicated to the Office of the Commission a copy of a paper which he had published on this subject advocating the acceptance of *Curculio granarius* Linnaeus, 1758 (the Grain Weevil) as the type species of the genus *Calandra* Clairville, neither he nor any later specialist has submitted an application to the Commission for a Ruling in the above sense. In the case of the opposing view, namely that the Commission should give a Ruling that *Curculio abbreviatus* Fabricius, 1787 (The Corn Root Weevil) should be accepted as the type species of the above genus and that the spelling to be accepted should be *Calendra* and not *Calandra*, an application was (as explained in the paragraph cited above) submitted in 1955 by Mrs. Patricia Vaurie. That application has since, however, been withdrawn by Mrs. Vaurie in favour of the Compromise Plan indicated in Point (2)(c) of the Questionnaire issued on 4th May 1956 (paragraph 22 above), i.e. the suppression of the generic name *Calandra* (or *Calendra*) under the Plenary Powers and the acceptance of the generic names *Sitophilus* Schoenherr and *Sphenophorus* Schoenherr respectively for the species referred to above. Thus at the present time there is no proposal before the Commission in favour of either of the courses which originally held the field and the ground is clear for the consideration of the foregoing problems in the light of the present Report and of the comments by specialists on which it is based.

SUMMARY OF PRINCIPAL ISSUES INVOLVED AND GENERAL CONCLUSIONS

(a) Summary of Principal Issues Involved

42. The conclusions which I have reached on the basis of the investigations described in the present Report and which are now submitted to the International Commission for consideration may be summarised as follows :—

(i) The rival spellings " Calandra " and " Calendra "

(1) In 1798, Clairville & Schellenberg established a nominal genus, the name of which was spelled as *Calendra* (in the text and in the explanation of the figures) and as *Calandra* (on the relevant plate) (paragraph 6).

(2) Under the decisions taken by the Copenhagen Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 43–44, Decision 71(1)(a)(i)) both the spelling *Calendra* and the spelling *Calandra* rank as Original Spellings and the question as to which should be accepted as the Valid Original Spelling is subject to the following Rules :—

(i) If the text contains clear evidence that one of the spellings was the result of an inadvertent error, the other spelling is the Valid Original Spelling.

(ii) If there is no clear evidence on the above subject, the Valid Original Spelling is whichever of the spellings concerned was used by the "First Subsequent User of the name" (paragraph 8).

(3) The text of Clairville & Schellenberg's work contains a Corrigendum page on which various mistakes in the main text are corrected but this page contains no reference to the rival spellings *Calendra* and *Calandra*. Accordingly, it cannot be held that there is clear evidence that one of these spellings is an inadvertent error for the other (paragraph 9).

(4) In view of (3) above, the question as to which of the above spellings is to be accepted under the Copenhagen Rule is a matter to be decided by the usage adopted by the First Subsequent User of the name. The First Subsequent User was Fabricius (J.C.) (1801) who used the spelling *Calandra* (paragraph 9).

(5) Accordingly under the *Règles* the spelling *Calandra* is the Valid Original Spelling and the spelling *Calendra* is an Invalid Original Spelling (paragraph 9).

(6) Up to 1925 the spelling *Calandra* was in very general use but since then the spelling *Calendra* has been the spelling used by those specialists who have accepted the Corn Root Weevil (*Curculio abbreviatus* Fabricius, 1787) as the type species of this genus, while the spelling *Calandra* has been used by those specialists who have continued to accept the Grain Weevil (*Curculio granarius* Linnaeus, 1758) as the type species. Thus the spelling *Calendra* has been used by all specialists in North America and the spelling *Calandra* by specialists in Europe and elsewhere outside North America (paragraphs 11—12).

(7) If the above generic name is to be retained—a question which is discussed in (19) and (20) below—it seems reasonable to conclude that the spelling to be adopted—whether the spelling *Calendra* or the spelling *Calandra*—should depend upon whether, in the former case *Curculio abbreviatus* Fabricius or, in the second case, the species *Curculio granarius* Linnaeus is accepted as the type species, this being the only solution which, so far as the spelling of this generic name is concerned, would be in harmony with the usage of a large and important group of specialists (paragraph 13).

(ii) The question of the species to be accepted under the "Règles" as the type species of the genus "Calandra" Clairville & Schellenberg, 1798

(8) Up to the year 1925 the nominal species *Curculio granarius* Linnaeus, 1758 (the Grain Weevil) was—following the dispositions made by Schoenherr some ninety years earlier—accepted by all workers as

the type species of the genus *Calandra* Clairville & Schellenberg, 1798. From the standpoint of Article 30 of the *Règles* this involves the assumption that the above species was the first of the originally included species to have been validly selected under Rule (g) in the above Article to be the type species of this genus. The author by whom *Curculio granarius* Linnaeus was first selected as the type species of this genus was Leach who so selected it in 1815 (paragraph 14).

(9) In 1925 Pierce drew attention to the fact that five years before the action by Leach described above Latreille (1810) had selected *Curculio abbreviatus* Fabricius to be the type species of the genus *Calandra*. Pierce accordingly transferred the above species to the genus *Calandra* (for which he adopted the spelling *Calendra*). Under this arrangement the name *Sphenophorus* Schoenherr, 1838, in which genus till then the Corn Root Weevil had been placed was sunk as a junior objective synonym of *Calendra*, and the Grain Weevil (*Curculio granarius* Linnaeus) which had thus been deprived of the name *Calandra* was placed in the genus *Sitophilus* Schoenherr, 1838 (paragraph 14).

(10) Pierce's conclusions won general support in North America, but were strongly resisted by specialists in Europe and elsewhere. These differences of opinion have endured to this day and in consequence there is at present a complete lack of universality in the use of the generic name *Calandra* (*Calendra*) (paragraphs 15 and 16).

(11) The validity of Latreille's type selection of 1810 upon which Pierce's argument depends has been impugned on two grounds, namely : (i) that the *Considérations générales* (the work by Latreille in question) cannot properly be accepted as one in which valid selections of type species for genera were made ; and (ii) that, even if the above work can be accepted for the above purpose, the selection in it of *Curculio abbreviatus* Fabricius as the type species of *Calandra* Clairville & Schellenberg is invalid, because those authors misidentified the Fabrician species when they placed it in their new genus (paragraphs 17 and 18).

(12) The argument that the *Considérations générales* is not a work which can be accepted as containing valid type selections is invalid, the International Commission in its *Opinion* 11 (published in 1910) having ruled that the above work is to be accepted for the above purpose. This decision was clarified and re-affirmed by the Commission in its *Opinion* 136 (published in 1939) (paragraph 17).

(13) From the evidence received there appears to be agreement at least by many specialists that, although Clairville & Schellenberg definitely cited the nominal species *Curculio abbreviatus* Fabricius as belonging to their new genus, they misidentified that species, describing and figuring under that name a different species (identified as being

Curculio striatopunctata Goeze, 1777, in the *Coleopterorum Catalogus* of Junk) (paragraph 18).

(14) The question of the species to be accepted as the type species of a genus considered by later workers to have been based upon a misidentified type species was for many years a cause of confusion and difficulty. In general, there were two schools of thought in this matter : (i) Many workers outside North America took the view that in such a case the proper course was to accept as the type species of such a genus the species which the original author was believed to have intended to refer to ; (ii) most workers in North America and, as the years went by, a growing number elsewhere took the view that no stability could ever be achieved in nomenclature if it were permissible for later authors to interpret a previously established nominal genus in the light of their subjective taxonomic ideas as to the intentions of the original author. This latter group of specialists held therefore that the only proper standard in such a case was the name cited by the original author for the species concerned. These views were in general held both as regards genera, the type species of which were determined either by original designation or monotypy and as regards genera, the type species of which were determined by subsequent selection. In this latter class of case, however, specialists occasionally took the view—the European specialists did in the present case—that the selection as the type species of a genus of a species believed by them to have been misidentified by the original author of the generic name in question was invalid and should be rejected (paragraph 18).

(15) The problem involved in cases where later authors believed that as the type species of a genus had been based (by original designation, by " indication " or by subsequent selection) upon a misidentified species was set at rest by the Thirteenth International Congress of Zoology, Paris, 1948 when it decided to insert in the *Règles* a provision : (i) directing that the author of a nominal genus is to be assumed correctly to have identified the nominal species placed by him in it and also that a subsequent author when selecting one of those species to be the type species is to be assumed to have correctly identified the species which he so selected ; and (ii) establishing a procedure under which, on the submission of an application by specialists in any such case, it became the duty of the International Commission to vary the type species of the genus in question if it could be shown that otherwise existing nomenclatorial practice would be disturbed (paragraph 18).

(16) It will be seen from (14) and (15) above that neither of the arguments advanced against the acceptance of Latreille's (1810) selection of *Curculio abbreviatus* Fabricius (the Corn Root Weevil) as the type species of *Calandra* Clairville & Schellenberg possesses any validity

under the *Règles* and therefore that that selection, as being the first selection of an originally included nominal species to have been made by any author subsequent to the establishment of the above genus is a valid selection. As matters stand, therefore, the nominal species *Curculio abbreviatus* Fabricius is the valid type species of the genus *Calandra* Clairville & Schellenberg (paragraph 18).

(17) The question next to be considered is whether the Commission (i) should give a Ruling that under the *Règles* the type species of *Calandra* Clairville & Schellenberg is *Curculio abbreviatus* Fabricius, at the same time using its Plenary Powers to validate the spelling *Calendra* (the spelling which, as explained in (7) above, is the spelling always used by specialists who accept the above species as the type species), or (ii) should use its Plenary Powers to designate *Curculio granarius* Linnaeus (the Grain Weevil) to be the type species, in that case retaining the spelling *Calandra* (that being the spelling always used by specialists who accept the Grain Weevil as the type species of this genus) (paragraph 19).

(18) In view of the economic importance of the two species of weevil involved in this case it appeared desirable that a preliminary canvass of opinion among interested specialists should be held as to the solution which should be adopted before the present case was actually placed before the Commission (paragraph 19).

(19) The difference in practice in regard to the use of the generic name *Calandra* Clairville & Schellenberg which had grown up during the last thirty years was so deepseated and the division of opinion on this matter between specialists in the Old World and the New World respectively so sharply marked as to make the present case very similar to that presented by the generic name *Colymbus* Linnaeus, 1758 (Class Aves), as regards which the Commission (in *Opinion* 401) had recently taken the view that the name *Colymbus* was so completely compromised by discordant usage as to have lost its practical utility. The Commission had in consequence suppressed the generic name *Colymbus* Linnaeus under the Plenary Powers, thus providing two well-understood generic names (*Podiceps* and *Gavia*) for the two genera to which in the New World and the Old World respectively the name *Colymbus* had for so long been applied (paragraphs 20 and 21). Accordingly, it was decided to include in the questionnaire referred to in (18) above not only a question as to whether it was desirable that *Curculio abbreviatus* Fabricius or alternatively *Curculio granarius* Linnaeus should be accepted as the type species of *Calandra* Clairville & Schellenberg but also the question whether a better solution would be one under which the Commission would use its Plenary Powers to

suppress the above generic name, thereby making available for the two species of weevil concerned the well-understood generic names *Sphenophorus* Schoenherr and *Sitophilus* Schoenherr respectively. A questionnaire setting out the above questions was issued to a large group of specialists on 4th May 1956 (paragraph 22).

(20) The replies received to the questionnaire of 4th May 1956 showed a clear majority in favour of the Compromise " Colymbus " Plan under which the name *Calandra* Clairville & Schellenberg would be suppressed in favour of the names *Sphenophorus* and *Sitophilus* respectively. Of the twenty-eight specialists who replied to the questionnaire, sixteen (16) favoured the Compromise Plan, twelve (12) favoured the retention of the generic name *Calandra* or *Calendra*. This latter group was, however, divided within itself, ten (10) advocating the validation of the European practice (acceptance of *Curculio granarius* Linnaeus as type species) and two (2) advocating the American practice (acceptance of *Curculio abbreviatus* Fabricius as type species). The smallness of the number of specialists advocating the acceptance of the current American practice is attributable to the fact that all except one of the American specialists gave their support for the Compromise Plan (paragraphs 23 and 24).

(iii) The question of the status to be accorded to the invalid specific name " abbreviatus " Fabricius, 1787, as published in the combination " Curculio abbreviatus ", the name universally applied to the Corn Root Weevil

(21) The specific name *abbreviatus* Fabricius, 1787, as published in the combination *Curculio abbreviatus*, is the specific name universally applied to the Corn Root Weevil. That name is, however, invalid, as it is a junior homonym of the specific name *abbreviatus* Linnaeus, 1758, as published in the combination *Curculio abbreviatus* (paragraph 25).

(22) Where a well-known specific name (such as *abbreviatus* Fabricius) is found to be invalid, as a junior homonym of some older name the normal practice of the International Commission is to validate that name by suppressing the senior homonym whenever that name is one which is not currently in use. Where, however, such a solution is impracticable, the normal practice of the Commission is to accept for the species concerned the oldest available—or the best known—of the available names of later date bestowed upon the species in question by later authors (paragraph 26). On the discovery of the unfortunate situation disclosed in (21) above the advice of specialists was sought as to the action which it was desirable that the Commission should take in this matter (paragraph 27).

(23) From the information obtained it is quite clear that it would be out of the question for the Commission to suppress the specific name *abbreviatus* Linnaeus, 1758, as published in the combination *Curculio abbreviatus*, for that name is the valid name of, and is currently used for, another important economic insect, the West Indian Sugar Cane Weevil (paragraph 28).

(24) Turning to the question of the various names which have been bestowed on the Corn Root Weevil, we find that the first name to be considered is the name *elegans* Fourcroy, 1785, as published in the combination *Curculio elegans*. This name, which has two years' priority over the name *abbreviatus* Fabricius, 1787, has been treated by some authors in the past as representing the same species as that named by Fabricius. It is not, however, in use, being now regarded as a *nomen dubium*. For the above reason the name *elegans* Fourcroy would be a most unsuitable name to use for so well-known an economic species as the Corn Root Weevil. It is desirable that to prevent any danger arising from attempts to introduce this name, it should now be suppressed by the Commission under the Plenary Powers (paragraph 29(a)).

(25) The next two names for the Corn Root Weevil were published by Gmelin in 1790 in the same book and on the same date. These names are : (i) *Curculio brachypterus* (: 1741) (which has priority over the same name as published by Olivier in the same year) ; (ii) *Curculio decurtatus* (: 1747). The name *brachypterus* Gmelin, which, it will be noted has page precedence over the name *decurtatus* Gmelin, is only a junior subjective synonym of *Curculio abbreviatus* Fabricius, 1787, while the name *Curculio decurtatus* Gmelin is a junior objective synonym of that name, having been published as a *nom. nov.* for it. Clearly, if it were necessary to give up the use of the name *abbreviatus* Fabricius for the Corn Root Weevil ,the objective synonym *decurtatus* Gmelin would be greatly preferable to the subjective synonym *brachypterus* Gmelin. No First Reviser choice appears to have been made as to the relative precedence to be accorded to these two names published in the same book and on the same date, and accordingly in the present Report such a choice is made in favour of *Curculio decurtatus* Gmelin (paragraph 29(b) to (d)).

(26) On the question of the action which it is desirable that the International Commission should take in regard to the specific name to be employed for the Corn Root Weevil views have been expressed by nine (9) specialists in response to the request for advice issued as explained in (22) above. Of these specialists seven (7)—i.e. all except two—favour the use by the International Commission of its Plenary Powers to validate the specific name *abbreviatus* Fabricius, 1787, as

published in the combination *Curculio abbreviatus*, for use for the Corn Root Weevil, without those Powers being used at the same time to suppress the senior homonym *abbreviatus* Linnaeus, 1758, as published in the same combination, the valid name for the West India Sugar Cane Weevil (paragraph 30). It is recognised that such a use of the Plenary Powers would be somewhat unusual, but in view of the fact that the Corn Root Weevil is currently placed by all specialists either in the genus *Calendra* (so spelled) or in the genus *Sphenophorus*, while the West India Sugar Cane Weevil is accepted as the type species of the genus *Diaprepes*, no serious risk of confusion would be involved if these two homonyms (*abbreviatus* Fabricius and *abbreviatus* Linnaeus) were both to become valid names. Such action would certainly fall within the ambit of the Plenary Powers, those Powers having been granted to the Commission by the International Congresses of Zoology without reservation as to their scope (paragraph 31).

(b) General Conclusions

43. As the result of the investigations described in the present Report the general conclusions which I have reached are that stability and universality in nomenclatorial practice would be most likely to be restored in this case if the International Commission on Zoological Nomenclature were to decide in favour of the majority view expressed by the representative specialists who have been consulted, that is, if it were to use its Plenary Powers :—

(1) to suppress the generic name " Calandra " Clairville & Schellenberg, 1798 thereby making (a) the generic name " Sphenophorus " Schoenheer, 1838, the oldest available generic name for the Corn Root Weevil (" Curculio abbreviatus " Fabricius, 1787) and (b) the generic name " Sitophilus " Schoenherr, 1838, the oldest available name for the Grain Weevil (" Curculio granarius " Linnaeus, 1758) ;

(2) as a special case in view of the economic importance of the Corn Root Weevil, to validate for that species the specific name " abbreviatus " Fabricius, 1787, as published in the combination " Curculio abbreviatus ", without at the same time invalidating its senior homonym " abbreviatus " Linnaeus, 1758, as published in the same combination, the name of the West India Sugar Cane Weevil.

44. Annexed to the present Report as Appendix 4 are particulars of the detailed action which would require to be taken by the International Commission if it were to decide in favour of the adoption of the general conclusions set out above.

APPENDIX 1

THE " CALANDRA/CALENDRA " PROBLEM

Specialists to whom the Questionnaire of 4th May 1956 was addressed

Taskhir Ahmad (*Department of Plant Protection, Karachi, Pakistan*)

S. W. Bailey (*Commonwealth Scientific and Industrial Research Organization, Canberra, Australia*)

J. Balfour-Browne (*British Museum (Natural History), London*)

H. Boschma (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*)

G. A. Brett (*Ministry of Agriculture and Fisheries, Surbiton, Surrey*)

T. G. Campbell (*Commonwealth Scientific and Industrial Research Organization, Canberra, Australia*)

P. B. Carne (*Commonwealth Scientific and Industrial Research Organization, Canberra, Australia*)

Director, Plant Pathology Laboratory (*Harpenden, Hertfordshire*)

T. Esaki (*Faculty of Agriculture, Kyushu University, Fukuoka, Japan*)

R. G. Fennah (*The Imperial College of Tropical Agriculture, Trinidad, B.W.I.*)

J. A. Freeman (*Ministry of Agriculture and Fisheries, Surbiton, Surrey*)

F. J. Gay (*Commonwealth Scientific and Industrial Research Organization, Canberra, Australia*)

R. Glen (*Entomology Division, Canadian Department of Agriculture, Ottawa, Canada*)

G. Grandi (*Istituto di Entomologia della Universitá degli Studi di Bologna, Italy*)

W. J. Hall (*Commonwealth Institute of Entomology, London*)

E. Handschin (*Naturhistorisches Museum, Basel, Switzerland*)

G. V. B. Herford (*Department of Scientific and Industrial Research, Pest Infestation Laboratory, Slough, Bucks, England*)

H. Kemper (*Deutsche Gesellschaft für Angewandte Entomologie, Berlin, Germany*)

T. W. Kirkpatrick (*The Imperial College of Tropical Agriculture, Trinidad, B.W.I.*)

K. H. L. Key (*Commonwealth Scientific and Industrial Research Organization, Canberra, Australia*)

K. B. Lal (*Government of India Ministry of Food and Agriculture, Directorate of Plant Quarantine, New Delhi, India*)

Sir Guy Marshall (*British Museum (Natural History), London*)

D. Miller (*Entomological Research Station, New Zealand*)

T. J. Naudé (*South African Department of Agriculture, Division of Entomology, Pretoria, South Africa*)

A. J. Nicholson (*Commonwealth Scientific and Industrial Research Organization Canberra, Australia*)

P. W. Oman (*United States Department of Agriculture, Agricultural Research Service, Entomology Research Branch, Plant Industry Station, Beltsville, Maryland, U.S.A.*)

N. D. Riley (*British Museum (Natural History), London*)

H. Sachtleben (*Deutsches Entomologisches Institut, Berlin, Germany*)

B. N. Schwanwitsch (*Entomological Laboratory, University of Leningrad, Leningrad, U.S.S.R.*)

H. Strouhal (*Naturhistorisches Museum, Vienna, Austria*)

Mrs. Patricia Vaurie (*The American Museum of Natural History, New York, N.Y., U.S.A.*)

E. Voss (*Osnabrück, Germany*)

Miss Rose E. Warner (*United States Department of Agriculture, Agricultural Research Service, Entomology Research Branch, Washington, D.C., U.S.A.*)

F. Zacher (*Berlin, Germany*)

Elwood C. Zimmerman (*Newton Center, Massachusetts, U.S.A., at that time as of the British Museum (Natural History), London*).

APPENDIX 2

VIEWS OF SPECIALISTS ON THREE POSSIBLE PLANS FOR SETTLING THE " CALANDRA " (" CALENDRA ") PROBLEM

Part 1 : Support for the application of the normal provisions of the " Règles " and therefore for the acceptance of " Curculio abbreviatus " Fabricius, 1787, as the type species of " Calendra " [sic] Clairville & Schellenberg, 1798

1. T. W. Kirkpatrick (*Trinidad*) (14th May 1956)

I do not think there is much to choose. I incline slightly to solution (a). What is important is that, whichever solution is adopted, it should be widely publicised so as to reach all economic entomologists, not only systematists.

2. Miss R. S. Warner (*Washington, U.S.A.*) (28th May 1956)

I cannot see where the retaining of the name *Calendra* for the Corn Root Weevil could cause any unnecessary confusion, as *Calendra* and *Sphenophorus* are well-known names, both having almost equal usage. So why not use the original and correct name *Calendra* for the Corn Root Weevil, to which it rightly belongs and for which it was originally intended. The rules of nomenclature are becoming quite flexible and if their aim is for securing greater stability in nomenclature it, unfortunately, will not be achieved if the rules are to be continually subject to change for various and sundry reasons. Therefore, following the International Rules for Nomenclature, a course more conducive to preventing confusion and promoting a stable and universally accepted nomenclature, I am in favour of solution (a), of acceptance of *Calendra* for the Corn Root Weevil and of *Sitophilus* for the Grain Weevil.

Part 2 : Support for the use of the Plenary Powers to designate " Curculio granarius " Linnaeus, 1758, to be the type species of " Calandra " Clairville & Schellenberg, 1798

1. Sir Guy Marshall (*London*) (13th May 1956)

The persistent improper use of *Sitophilus* in the United States has given rise to all the trouble. I have therefore no hesitation in saying that the wisest course would be to adopt Section 10(2)(b) of the Secretary's memorandum—except that *Calendra* should be written correctly as *Calandra*—so that *granaria* should be the type species of *Calandra* and *abbreviatus* the type species of *Sphenophorus*, both *Calendra* and *Sitophilus* being rejected.

2. H. Kemper (*Berlin*) (30th May 1956)

Über den Inhalt Ihres gefl. Schreibens habe ich mit mehreren Kollegen gesprochen. In Anlage finden Sie die Stellungnahme des am Kornkäfer besonders interessierten Instituts für Vorratsschutz der Biologischen Bundesanstalt f. Land- und Fortswirtschaft ; Berlin-Dahlem.

Die Gesellschaft für angewandte Entomologie teilt die dort wiedergegebene Auffassung.

Es wird die Lösung (b) befürwortet. (European Proposal.) Eine angelsächsische Trivialname " Corn Root Weevil " ist hier unbekannt (nicht genannt in : *Common Names of British Insects*, 1947 ; *Common Names of Insects*, Melbourne, 1955 ; *Common Names of Insects approved by the American Ass. of Ec. Ent.*, 1950 ; *List of the French Names of Insects of Ec. Ent. in Canada*, Quebec, 1952), ebenso wie seine Verbindung mit *Sphenophorus abbreviatus* Fabr. sensu Schaufuss, Kuhnt, Reitter. Diese letzte Art ist nach Angaben der deutschen coleopterologischen Literatur im südlichen Europa verbreitet, seltener in Mitteleuropa. (Fundort nach Schaufuss : Schilfrand von Gewässern ; als Pflanzenschädling nicht genannt.) Zunächst wäre klarzustellen mit welcher Art die Amerikaner den Namen *S. abbreviatus* Fabr. verbinden, eine Art, die nach Hemming von wirtschaftlicher Bedeutung ist die Schädlichkeit von *Sphenophorus* maidis an Mais im Süden der Vereinigten Staaten.

3. G. Grandi (*Bologna, Italy*) (7th June 1956)

In risposta alla vostra lettera vi communico che io sono del parere di mantenere il nome di *Calandra* (non *Calendra*) per il Curculionide del Grano (Grain Weevil) ed il nome di *Sphenophorus* per i Curculionidi delle radici di Graminacee (Corn Root Weevil).

4. E. Voss (*Osnabruck*) **and F. Zacher** (*Berlin*) (12th June 1956)

To restore stability and uniformity in nomenclature, we recommend the adoption of *Calandra* for the Grain Weevil by designation by the Commission of *granaria* Linnaeus under the Plenary Powers to be the type species of the above genus. There should be no suppression of the name *Calandra*.

5. F. Zacher (*Berlin*) (12th June 1956)

For Dr. Zacher's reply, see 4 above.

6. H. Strouhal (*Vienna*) (14th June 1956)

The Viennese Coleopterists are all for the European Proposal : Adoption of *Calandra* for the Grain Weevil (*granarius* Linnaeus) by designation by the Commission of that species under its Plenary Powers to be the type species of the genus *Calandra* Fabricius, 1801, and acceptance of *Sphenophorus* for the Corn Root Weevil (*abbreviatus* Fabricius).

7. W. J. Hall (*London*) (29th June 1956)

I think that the solution most likely to produce the results you require is (b) (the European proposal), with (c) (suppression of the name *Calendra* or *Calandra*) as the better of the remaining alternatives.

8. T. Esaki (*Fukuoka, Japan*) (14th July 1956)

The Rice Weevil, *Calendra oryzae*, is one of the most important and most popular pests of stored rice in this country, and for scientific articles the name " *Calandra oryzae* " was used almost always in economic papers and textbooks as shown in the annexed notes [not reproduced]. *Calendra granarius* is also found in Japan since the end of World War II, but much less important than *oryzae*. *Sphenophorus abbreviatus* is not known from the East and rarely referred to in textbooks and papers in this country.

The generic name *Sitophilus* for the Rice Weevil was introduced for the first time by Kono into Japanese literature in 1937 and he followed Pierce. Although he was then followed by a few taxonomists in this country, in the bulk of literature in economic, as well as in systematic, entomology, the name *Calandra* (the spelling *Calendra* is not used here) has been and is still consistently used up to the present.

Considering the above-mentioned status of the problem in Japan, it seems to me to be most appropriate to adopt the solution (b) (the European Proposal). I consulted several other entomologists, both economic and taxonomic, and they all agreed to the conclusion mentioned above.

9. J. A. Freeman and **G. A. Brett** (*Surbiton, Surrey*) (28th September, 1956)

We recommend the adoption of Solution (b) for the following reasons :—

(i) To us at least, the generic name of the Grain and Rice Weevils is of far greater importance than that of the Corn Root Weevil. The latter in fact is a matter of indifference to us. We are of the opinion that this is the case in most parts of the world.

(ii) The name *Calandra* has been used for the Grain and Rice Weevils much more widely and for a much longer period than has *Sitophilus*, and it is much more widely used in the economic literature. A change would cause much confusion and inconvenience.

(iii) From our point of view the compromise Proposal (c) has no advantage over the American Proposal since we are only interested in the name of the Grain Weevil. In our view the difference of spelling (*Calendra* as distinct from *Calandra*) would be sufficient to prevent confusion in the future. We therefore think that the American proposal is less undesirable than the alternative proposal (c).

10. G. A. Brett (*Surbiton, Surrey*) (28th September 1956)

For Mr. G. A. Brett's reply, see 9 above.

Part 3 : Support for the Compromise Plan involving the suppression under the Plenary Powers of the generic name " Calandra " Clairville & Schellenberg, 1798, leaving available the generic names " Sphenophorus " Schoenherr, 1838, for the Corn Root Weevil (" abbreviatus ") and " Sitophilus " Schoenherr, 1838, for the Grain Weevil (" granarius ")

1. Mrs. Patricia Vaurie (*New York*) (8th May 1956)

I feel that Proposal (c), or compromise proposal, is the one which would cause the least confusion and I favour this alternative plan.

2. R. G. Fennah (*Trinidad*) (14th May 1956)

I don't think there is much to choose. I incline slightly to Solution (c).

3. R. Glen (*Ottawa*) (22nd May 1956)

It is our opinion that Solution (c) is most likely to remove confusion and to restore stability and uniformity in the nomenclature used for the two species of Weevil. We in Canada are happy, of course, with Solution (a), but taking the world view we feel that the best chances of success lie with Solution (c).

4. J. Balfour-Browne and **E. C. Zimmerman** (*London*) (25th May 1956)

We have examined the evidence and have concluded that the proposed Solution (c), which suggests that the name *Calendra* (and *Calandra*) be suppressed

by the Commission under its Plenary Powers, and that *Sphenophorus* Schoenherr, 1838, for the Corn Root Weevil (*abbreviatus*), and *Sitophilus* Schoenherr, 1838, for the Grain Weevil (*granarius*), be adopted, would most likely avoid confusion and restore stability and uniformity in nomenclature.

5. E. C. Zimmerman (*London*) (25th May 1956)

For Dr. E. C. Zimmerman's reply, see 4 above.

6. H. Sachtleben (*Berlin*) (26th May 1956)

I should recommend Solution (c) because during the last thirty years most of German literature dealing with applied entomology has used the generic name *Calandra* for the Grain Weevil (*granarius* Linnaeus). Nevertheless we think that the above-mentioned proposal would be the most recommendable solution of the question. By removal of the name *Calendra* it would ensure that in future there could be no confusion between the generic names used for the Grain Weevil and for the Corn Root Weevil respectively.

At least this solution for the generic name of the Grain Weevil would also be in accordance with the *Coleopterorum Catalogus*, the most important catalogue for the systematists. Further it would approach to the strict application of the *Règles* in so far as it does not change the designation of type species, which remains, under the *Règles*. Compared with these advantages the suppression of the name *Calandra* seems to us of small importance and the most acceptable deviation from the *Règles*.

That is our point : any decision of the International Commission requiring a suspension of the *Règles* should try to remain as close as possible to the strict application of the *Règles*. In the present question the suppression of the name *Calendra* and adoption of *Sphenophorus* and *Sitophilus* seem to be the best way to fulfil this postulate.

7. K. H. L. Key and others [see 8—11 below] (*Canberra*) (30th May 1956)

I have brought your letter before a staff meeting of the Division of Entomology of the Commonwealth Scientific and Industrial Research Organization and have also received notes on the question at issue from the few members of the Division whose work has brought them into contact with this problem. As a result I would answer your questions as follows :—

. . . . . .

All the entomologists concerned favour Solution (c), as I do myself.

8. P. B. Carne (*Canberra*) (30th May 1956)

For Dr. Carne's reply, see 7 above.

9. F. J. Gay (*Canberra*) (30th May 1956)

For Mr. Gay's reply, see 7 above.

10. T. G. Campbell (*Canberra*) (30th May 1956)

For Mr. Campbell's reply, see 7 above.

11. S. W. Bailey (*Canberra*) (30th May 1956)

For Mr. Bailey's reply, see 7 above.

12. P. W. Oman (*Beltsville, Maryland*) (1st June 1956)

In my opinion this is a case where there is general confusion and for that reason suspension of the Rules seems indicated. I believe that the alternative course outlined in Solution (c) is the desirable course of action.

13. T. J. Naudé (*Pretoria*) (4th June 1956)

This would seem to be a case in which the Commission could justifiably and usefully exercise its Plenary Powers by suppressing the name *Calendra* (or *Calandra*) and I should therefore recommend the adoption of Solution (c).

14. G. V. B. Herford (*Slough*) (8th June 1956)

After considerable discussion, the balance of opinion here is in favour of Solution (c), namely, the suppression of the name *Calendra* (or *Calandra*) and the use of *Sphenophorus* and *Sitophilus* respectively for the Corn Root Weevil and the Grain Weevil.

15. K. B. Lal (*New Delhi*) (12th June 1956)

During the last seven years or so, the generic name *Sitophilus* has increasingly replaced *Calandra* so far as our Weevil pest species *oryzae* in India has been concerned. Most of the entomologists in India now refer to this species as *Sitophilus oryzae* Linnaeus, and it may create a little confusion if we have to revert back again to the use of the generic name *Calandra.*

In view of what I have said above, either of the suggestions contained in (a) and (c) of paragraph 10(2) of your paper would be convenient to us in India but for the reasons mentioned in paragraph 4 of your note, I would prefer if the suggestion contained in Proposal (c) is allowed to prevail.

16. N. D. Riley (*London*) (21st June 1956)

I prefer alternative (c) (the Compromise Proposal), placing (a) (the American Proposal) as runner up, with (b) (the European Proposal) unplaced.

APPENDIX 3

VIEWS OF SPECIALISTS ON THE QUESTION WHETHER IT IS DESIRABLE THAT THE SPECIFIC NAME "ABBREVIATUS" FABRICIUS, 1787, AS PUBLISHED IN THE COMBINATION "CURCULIO ABBREVIATUS" SHOULD BE VALIDATED UNDER THE PLENARY POWERS AS THE SPECIFIC NAME FOR THE CORN ROOT WEEVIL

Part 1 : Support by seven specialists for the validation of the specific name "abbreviatus" Fabricius, 1787, as the specific name for the Corn Root Weevil

1. E. M. Hering (*Berlin*) (13th May 1957)

I have studied the papers in the matter of the name of the Corn Root Weevil which you sent with your kind letter on May 9th. I give you my views as follows :—

. . . . . .

(4) If the Commission were to vote for *Sphenophorus* Schoenherr, with the type *abbreviatus*, I would propose :—

(a) to validate the name *abbreviatus* Fabricius, 1787, by placing it on the *Official List*, being the type species of *Sphenophorus* Schönherr, as the name of the Corn Root Weevil ;

(b) to place on the *Official List* the generic name *Diaprepes* Schönherr, 1823, to include the species name *abbreviatus* Linnaeus ;

(c) to suppress the totally unused name *elegans* Fourcroy, 1785.

In view of the very importance of these species in Applied Entomology I cannot see another way to secure the needed stability in the present nomenclature of these species.

2. Sir Guy Marshall (*London*) (16th May 1957)

In reply to your letter of 9th May on this question, here are my answers to your three queries :—

(1) I certainly think that it would be entirely wrong to suppress the name *abbreviatus* Linnaeus (1758) in favour of *abbreviatus* Fabricius (1787). But I also cannot see any real necessity for suppressing Fabricius's name either. These two names have now been used for over a century and a half without any trace of confusion, as the species belong to two widely different subfamilies. I therefore suggest that the only sensible course would be to suppress the ancient homonymy, which ceased to exist 156 years ago when Fabricius transferred his species into *Calandra*. I fail to see how this can do any harm and it will certainly prevent the confusion that would inevitably result from the

needless change of the name of an important pest, concerning which there is a very large volume of literature.

(2) There is no real justification for applying the name *elegans* Fourcroy (1785) to the Corn Root Weevil. Fourcroy's types are irretrievably lost, and his description cannot be applied with certainty to any known species. Schönherr was not able to trace the species and tentatively applied the name to *abbreviatus* Fabricius, but did so with an interrogation mark. This was arbitrarily omitted from the last Catalogue without any justification, and it is this piece of carelessness that has really given rise to the whole trouble. In my opinion *elegans* Fourcroy should be relegated to the list of *nomina delenda*.

(3) I consider that *Sphenophorus abbreviatus* Fabricius is the name that should preferably be retained for the Corn Root Weevil.

3—6. W. J. Hall, E. O. Pearson, R. D. Pope and **H. S. Bushell** (*London*) (29th August 1957)

We entirely agree that as *abbreviatus* L., 1758 is the name of an economically important weevil of the genus *Diaprepes* in the West Indies, it would be quite wrong to suppress it in order to preserve *abbreviatus* F., 1789 for the Corn Root Weevil.

It seems doubtful, in view of the inadequacy of the description of *Curculio elegans* Fourcroy, 1785 and of the size given for it, whether this is really a synonym of *abbreviatus* F., and this is doubtless the reason why it has not found favour as a possible earlier name. This appears to leave *brachypterus* Gmelin and *decurtatus* Gmelin, both of 1790 as possible candidates. The former has page priority, but the latter is, in effect, a new name proposed for the junior homonym *abbreviatus* F., since Gmelin gives a reference to Fabricius's original description. I feel sure that argument would arise concerning this choice, which would further confuse a situation that would anyway be unsatisfactory because neither name is well known.

We feel therefore, that the course proposed, of validating *abbreviatus* F. while maintaining *abbreviatus* L., would be a common sense solution. As it is thus impossible, by normal application of the Rules, to allow *abbreviatus* F. to stand as the name of the Corn Root Weevil, I feel that this removes one of the main arguments in favour of the American proposal and usage regarding *Calendra abbreviatus* F. As the Commission's powers have to be invoked anyway, if we are to avoid total confusion by the rigid application of the Rules, let us go the whole hog and suppress *Calendra*, validate the retention of *abbreviatus* F. in addition to *abbreviatus* L., and thus retain *Calendra granarius* L. for the Grain Weevil, *Sphenophorus abbreviatus* F. for the Corn Root Weevil, and *Diaprepes abbreviatus* L. for the West Indian Sugar Cane Weevil.

The present letter has been prepared after consultation with Mr. E. O. Pearson, Mr. R. D. Pope, and Capt. H. S. Bushell of the Commonwealth Institute of Entomology who concur in the recommendations set out above.

7. E. Voss (*Harderberg, Germany*) (18th September 1957)

Freundlichen Dank für Ihren Brief vom 6. ds. Monats, in welchem Sie noch einmal die Gesichtspunkte klarlegen, die zur Änderung des bisher gebräuchlichen Artnamens *abbreviatus* F., 1787, in *decurtatus*, Gmelin, 1790, Veranlassung geben sollten.

Ich stimme sehr Ihren Ausführungen zu und kann Ihre Frage : (1) Should the Commission (after suppressing the name *elegans* Fourcroy) accept for the Corn Root Weevil the name which would then become the oldest available name for that species, namely the name *decurtatus* Gmelin, 1790 ? zustimmend mit ja beantworten.

Allerdings scheint es mir, als ob sich in Ihre Frage (2) ein Druckfehler eingeschlichen hat. Es müsste hier wohl statt *decurtatus* Fabricius, 1787 heissen : *abbreviatus* Fabricius, 1787 ?

Da nach Ihren weiteren Ausführungen die Mehrzahl der befragten Spezialisten sich für die Beibehaltung des eingebürgerten Namens *abbreviatus* ausgesprochen haben, dürfte allerdings wenig Aussicht bestehen, diese Frage in rein systematischer Hinsicht geklärt zu sehen. Die Änderung des Namens erfolgt schliesslich 150 Jahre zu spät, da inzwischen die angewandte Entomologie ihren berechtigten Wunsch auf Stabilität der meist gebräuchlichen Namen zum Ausdruck bringt.

Part 2 : Objection by two specialists to the validation of the specific name " abbreviatus " Fabricius, 1787, as the specific name for the Corn Root Weevil

1. J. Balfour-Browne (*London*)

(a) Letter dated 14th May 1957

(letter supporting the validation of the specific name *abbreviatus* Fabricius, 1787)

As the Commission must, in any case, act in this matter under the Plenary Powers I see no reason why they cannot also preserve and put onto the *Official List of Specific Names*, the name *abbreviatus* Fabricius by overruling under the Plenary Powers the need to suppress the earlier homonym or the later. Linnaeus's *abbreviatus* is the type-species of *Diaprepes*. Fabricius's *abbreviatus* is the type species of *Calandra*. Both have therefore importance in this respect demanding retention.

I consider that the Corn Root Weevil should continue to be known as *abbreviatus* Fabricius, 1787.

(b) Letter dated 30th May 1957

(letter withdrawing support for the validation of the specific name *abbreviatus* Fabricius, 1787)

I would be very unprepared to make a precedent, in this case, of retaining a junior homonym as it would be very difficult to resist pressure in other cases to retain or even restore junior homonyms that taxonomists have already rejected. I think the Principle of Primary Homonymy should be preserved. I am aware, in saying this, that I am retracting my proposal in my letter of 14th May but more profound consideration suggests that convenience should here give way to principle.

2. Elwood C. Zimmerman (*Newton Center, Mass., U.S.A.*)

(a) Letter dated 26th May 1957

I have heard from Balfour-Browne, and I will cast my vote along with his conclusions.

[NOTE : The reference here is to Mr. Balfour-Browne's letter of 14th May 1957 (reproduced as Document 1(a) in Part 2 of the present Appendix) where the conclusion reached was in favour of the validation of the specific name *abbreviatus* Fabricius as the specific name for the Corn Root Weevil.]

(b) Letter dated 11th September 1957

I have re-examined the evidence in the documents at hand, and it seems to me that the data assembled in Balfour-Browne's letter to you of 30th May, 1957, indicate the course of action to be followed. As you point out in your letter of 18th May 1957 to Balfour-Browne, the validation of *abbreviatus* would demand an unusual use of the Plenary Powers of the Commission. In this light, and in view of the fact that *decurtatus* Gmelin appears to be a new name for *abbreviatus* Fabricius, nec Linnaeus, I shall continue to give my support to Balfour-Browne's conclusions and will vote for the use of *decurtatus*.

[NOTE : The above was in reply to a letter which, as Secretary, I wrote to Dr. Zimmerman, whose previous letter (of 26th May 1957) had been written in support of Mr. Balfour-Browne's letter of 14th May 1957 in which the validation of the name *abbreviatus* Fabricius had been advocated, my purpose being to ascertain what was Dr. Zimmerman's opinion on the above question in the light of the change of attitude indicated in Mr. Balfour-Browne's letter of 30th May 1957. (intl'd) F.H. 14th Sept. 1957]

APPENDIX 4

Action which would require to be taken if the International Commission on Zoological Nomenclature were to approve the Plan which has received the largest amount of support among the specialists consulted, namely, the Plan under which the name " Calandra " would be suppressed by the Commission under the Plenary Powers, thus leaving " Sphenophorus " as the valid generic name for the Corn Root Weevil (" abbreviatus ") and " Sitophilus " as the valid generic name for the Grain Weevil (" granarius ")

(1) The Plenary Powers to be used :—

(a) to suppress the following names for the purposes of the Law of Priority but not for those of the Law of Homonymy :—

(i) the generic name *Calandra* Clairville & Schellenberg, 1798 ;

(ii) the specific name *elegans* Fourcroy, 1785, as published in the combination *Curculio elegans* ;

(b) to validate the specific name *abbreviatus* Fabricius, 1787, as published in the combination *Curculio abbreviatus* [the specific name for the Corn Root Weevil], at present invalid as a junior homonym of the specific name *abbreviatus* Linnaeus, 1758, as published in the combination *Curculio abbreviatus* [the specific name of the West Indian Sugar Cane Weevil].

(c) to validate the emendation to *oryzae* of the specific name *oryza* Linnaeus, 1763, as published in the combination *Curculio oryza*.

(2) The following names to be placed on the *Official List of Generic Names in Zoology* :—

(a) *Sphenophorus* Schoenherr, 1838, as validated under the Plenary Powers in (1)(a)(i) above (gender : masculine) (type species, by original designation : *Curculio abbreviatus* Fabricius, 1787, as validated under the Plenary Powers in (1)(b) above) ;

(b) *Sitophilus* Schoenherr, 1838 (gender : masculine) (type species' by original designation : *Curculio oryzae* Linnaeus, 1763) ;

(c) *Diaprepes* Schoenherr, 1823 (gender : masculine) (type species, by original designation : *Curculio spengleri* (emend. of *sprengleri*) Linnaeus, 1767).

(3) The following names to be placed on the *Official List of Specific Names in Zoology* :—

(a) *abbreviatus* Fabricius, 1787, as published in the combination *Curculio abbreviatus* and as validated under the Plenary Powers

in (1)(b) above (specific name of type species of *Sphenophorus* Schoenherr, 1838);

(b) *granarius* Linnaeus, 1758, as published in the combination *Curculio granarius*;

(c) *oryzae* (emend. under the Plenary Powers in (1)(c) above of *oryza*) Linnaeus, 1763, as published in the combination *Curculio oryza* (specific name of type species of *Sitophilus* Schoenherr, 1838);

(d) *abbreviatus* Linnaeus, 1758, as published in the combination *Curculio abbreviatus*.

(4) The following names to be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*:—

(a) *Calandra* Clairville & Schellenberg, 1798 (as suppressed under the Plenary Powers in (1)(a)(i) above);

(b) *Calendra* Clairville & Schellenberg, 1798 (an Invalid Original Spelling for *Calandra* through the action of Fabricius (J.C.) (1801) as "First Subsequent User");

(c) the under-mentioned junior homonyms of *Calandra* Clairville & Schellenberg, 1798:—

(i) *Calandra* Fitzinger, 1815;

(ii) *Calandra* Oken, 1817;

(iii) *Calandra* Brookes, 1830;

(iv) *Calandra* Lesson, 1837;

(v) *Calandra* Gistl, 1848;

(d) the under-mentioned junior homonyms of *Sphenophorus* Schoenherr, 1838:—

(i) *Sphenophorus* Newberry, 1890;

(ii) *Sphenophorus* Breitfuss, 1898.

(5) The following names to be placed on the *Official Index of Rejected and Invalid Specific Names in Zoology*:—

(a) *elegans* Fourcroy, 1785, as published in the combination *Curculio elegans* (as suppressed under the Plenary Powers in (1)(a)(i) above);

(b) *decurtatus* Gmelin (J.F.), [1790], as published in the combination *Curculio decurtatus* (a junior objective synonym of *abbreviatus* Fabricius, 1787, as published in the combination *Curculio abbreviatus*, as validated under the Plenary Powers in (1)(b) above);

(c) *oryza* Linnaeus, 1763, as published in the combination *Curculio oryza* (ruled under the Plenary Powers in (1)(c) above to be an Invalid Original Spelling) ;

(d) *sprengleri* Linnaeus, 1767, as published in the combination *Curculio sprengleri* (an Invalid Original Spelling for *spengleri*).

(6) The following names to be placed on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* :—

(a) CALANDRINI (correction of CALANDRIDES) Schoenherr, 1837 (invalid under *Declaration* 20 because the name of its type genus (*Calandra* Clairville & Schellenberg, 1798) suppressed under the Plenary Powers in (1)(a)(i) above) ;

(b) CALANDRIDES Schoenherr, 1845 (an Invalid Original Spelling for the name specified in (i) above) ;

(c) CALENDRINAE Leng (C.W.), 1920 (an Erroneous Subsequent Spelling for the name specified in (i) above).

SUPPORT FOR THE APPLICATION REGARDING THE SPECIFIC NAME "PADI" LINNAEUS, 1758 ("APHIS") (CLASS INSECTA, ORDER HEMIPTERA)

By **MIRIAM A. PALMER**

(*Colorado State University, Fort Collins, Colorado, U.S.A.*)

(Commission Reference : Z.N.(S.) 1225)

(For the application submitted see *Bull. zool. Nomencl.* **13** : 248—250)

(Letter dated 29th October 1957)

Doncaster's paper regarding *Aphis padi* has just been received.

I favour the action proposed therein, namely: to validate the name *Aphis padi* Linnaeus as applying to the European bird cherry aphid.

PURCHASED

SUPPORT FOR THE APPLICATION REGARDING THE SPECIFIC NAME "PARVULA" MÖRCH, 1863 ("APLYSIA") (CLASS GASTROPODA)

By **HENNING LEMCHE**

(*Universitetets Zoologiske Museum, Copenhagen, Denmark*)

(Commission Reference : Z.N.(S.) 1209)

(For the application submitted see *Bull. zool. Nomencl.* **12** : 240—244)

(Letter dated 6th November 1957)

This is to explain that I am very much in favour of validating the name *Aplysia parvula* Mörch, 1863, as against *spuria* Krauss, 1848, as proposed by Dr. Nellie B. Eales. As a specialist in Opisthobranchs I cannot see any advantage in trying to revalidate *spuria*.

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Draft of the English Text of the " Régles "

The attention of zoologists and palaeontologists is drawn to the publication on 29th November 1957 of the draft of the revised English Text of the " Régles " which will form the basis of the discussions by the Colloquium on Zoological Nomenclature and the Fifteenth International Congress of Zoology in London in July 1958. This document has been published in two instalments as Sextuple-Part 1/6 and Triple-Part 7/9 of Volume 14 of the " Bulletin of Zoological Nomenclature ".

All enquiries in regard to the above and other publications issued by the International Trust for Zoological Nomenclature should be addressed to : The Publications Officer of the Trust, 41 Queen's Gate, London, S.W.7.

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The Official Organ of

THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

PURCHASED
- 9 JUN 1958

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the International Commission on Zoological Nomenclature

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 16, Part 2 (pp. 49–80, 6 text-figs.) 6th June 1958
(also (I)–(VIII))

NOTICES PRESCRIBED BY THE INTERNATIONAL CONGRESS OF ZOOLOGY

The following notices are given in pursuance of decisions taken, on the recommendation of the International Commission on Zoological Nomenclature (see 1950, *Bull. zool. Nomencl.* **4** : 51–56, 57–59), by the Thirteenth International Congress of Zoology, Paris, July 1948 (see 1950, *Bull. zool. Nomencl.* **5** : 5–13, 131).

(a) Date of commencement by the International Commission on Zoological Nomenclature of voting on applications published in the " Bulletin of Zoological Nomenclature "

NOTICE is hereby given that normally the International Commission will start to vote upon applications published in the *Bulletin of Zoological Nomenclature* on the expiry of a period of six calendar months from the date of publication in the *Bulletin* of the applications in question. Any specialist who may desire to comment upon any of the applications published in the present Part of the *Bulletin* is accordingly invited to do so in writing and in duplicate to the Secretary to the Commission, as quickly as possible and in any case, in sufficient time to enable the communication in question to reach the Secretariat of the Commission before the expiry of the six-month period referred to above.

(b) Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in certain cases

NOTICE is hereby given that the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers involved the application published in the present Part of the *Bulletin of Zoological Nomenclature* in relation to the under-mentioned names :—

Mysis Latreille, [1802–1803], designation of type species for, and validation of neotype for species (*Cancer oculatus* Fabricius, 1780) so designated (Class Crustacea, Order Mysidacea) (Z.N.(S.) 1319) ;

Notices prescribed by the International Congress of Zoology (*continued*)

Dactylioceras Hyatt, 1867, designation of a type species for, in harmony with accustomed usage (Class Cephalopoda, Order Ammonoidea : Jurassic) (Z.N.(S.) 956) ;

gemmascens Esper, [1794] (*Madrepora*), validation of (Class Hydrozoa, Order Stylasterina) (Z.N.(S.) 950).

2. Comments received in sufficient time will be published in the *Bulletin* ; other comments, provided that they are received within the prescribed period of six calendar months from the date of publication of the present Part will be laid before the International Commission on Zoological Nomenclature at the time of commencement of voting on the application concerned.

3. In accordance with the procedure agreed upon at the Session held by the International Commission on Zoological Nomenclature in Paris in 1948 (see 1950, *Bull. zool. Nomencl.* **4** : 56), corresponding Notices have been sent to the serial publications *Nature* and *Science*.

FRANCIS HEMMING

Secretary to the International Commission on Zoological Nomenclature

28 Park Village East, Regent's Park,
London, N.W.1, England.

6th June. 1958.

PERSONNEL OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Election of a Commissioner

In accordance with the procedure prescribed by the Thirteenth International Congress of Zoology, Paris, 1948, the following election to the Membership of the Commission has been made by the Executive Committee, with effect from the date shown below :—

Per Brinck, Lunds Universitets, Zoologiska Institution, Lund, Sweden (19th May 1958)

FRANCIS HEMMING

Secretary to the International Commission on Zoological Nomenclature

28 Park Village East, Regent's Park,
London, N.W.1.
19th May 1958

PROPOSED USE OF THE PLENARY POWERS TO VALIDATE A NEOTYPE FOR THE NOMINAL SPECIES "CANCER OCULATUS" FABRICIUS (O.), 1780, TO DESIGNATE THE SPECIES SO NAMED TO BE THE TYPE SPECIES OF THE GENUS "MYSIS" LATREILLE, [1802–1803] (CLASS CRUSTACEA, ORDER MYSIDACEA) AND MATTERS INCIDENTAL THERETO

By **CHARLOTTE HOLMQUIST**

(*Lunds Universitets, Zoologiske Institutionen, Lund, Sweden*)

(Commission Reference : Z.N.(S.) 1319)

The purpose of the present application is to ask the International Commission on Zoological Nomenclature to use its Plenary Powers to provide a valid basis for the continued use of the generic name *Mysis* Latreille, [1802–1803] (Class Crustacea, Order Mysidacea) in its accustomed sense. This is a well-known and important genus, having ten species currently assigned to it and being distributed through the northern parts of the Northern Hemisphere and with one more species described from South Georgia. It is also the type genus of the family MYSIDAE. This generic name has been in continuous use since it was erected, i.e. for about 150 years, and it would be very confusing and undesirable if this long-established practice were to be disturbed. Finally, the generic name *Mysis* has been taken as the base for the Ordinal name Mysidacea. The action needed in order to prevent disturbance from occurring is, first, that the Plenary Powers should be used to designate as the type species of this genus a well-known species possessing the characters recognized as diagnostic of this genus. There is, however, some doubt as to how the nominal species now recommended for designation as the type species of this genus should be interpreted and the Commission is being asked to set that doubt at rest by using its Plenary Powers to validate the neotype for that species which is designated in the Annexe to the present application. Finally, the Commission is being asked to use the same Powers to suppress the specific name of the nominal species which is at present the type species of this genus, the nominal species so named being unrecognizable and its specific name in consequence a *nomen dubium*. The facts of this case are set out in the following paragraphs.

2. In the year 1780, Otto Fabricius (*Fauna groenl.*) described two crustacean species, viz. *Cancer pedatus* (: 243) and *Cancer oculatus* (: 245). Of the latter, an incomplete figure was also given. In 1781, Fabricius (*K. Danske Vid. Selsk. Skr.* (n.s.) **1**) published figures and descriptions of both species (: 561–565 and fig. 1, and : 565–567 and fig. 2, resp.). A facsimile reproduction of Fabricius' 1780 figure of *Cancer oculatus* is annexed to the present paper as Figure (1). Similar reproductions of Fabricius' 1781 figures both of the above species and of his nominal species *Cancer pedatus* are annexed as Figure (2).

3. In the year [1802–1803[1]], Latreille (*Hist. nat. gén. partic. Crust. Ins.* **3** : 36) established a new genus, *Mysis*, for *Cancer pedatus*, and referred *C. oculatus* to the same genus. Eight years later Latreille (1810, *Consid. gén. Anim. Crust. Arach. Ins.* : 422) in his " Table des genres avec l'indications de l'espèce qui sert de type " writes as follows : " *Mysis. Cancer pedatus*, Oth. Fab." thus definitely selecting *pedatus* Fabricius as the type of his genus *Mysis*.

4. The difficulties arising in the present case are as follows :—

(a) The type material for both of Fabricius's species has disappeared.

(b) From the description by Krøyer (1861, *Naturhist. Tidsskrift* (3) **1** : 13–21 41) and from the figures published earlier by him (1846, (?) *in* Gaimard, *Voyages Scand. Lap.* : pl. 8, fig. 2, 3) it was up till now considered possible to identify the species which has ever since been called *oculatus*. Almost all of Krøyer's material has also been lost.

(c) Another species of the same genus, *Mysis mixta* Lilljeborg, 1852, is abundant in Greenland waters. Fabricius's figure of *C. oculatus* from the year 1781 (fig. 2) may have been drawn from a specimen of this species.

(d) *Cancer pedatus* O. Fabricius is difficult to identify. In most cases it has been identified with *Cancer oculatus* O. Fabricius, but doubts as to its identity have been raised on several occasions, although nobody has ventured to state that he could identify it with certainty. Leach (1830, *Trans. Plymouth Inst.* **1** : 176–178) seems to have had some material to hand (this material, too, is no longer traceable) and he describes the species under the name of *Megalophthalmus fabricianus*, adding a note which runs " *Cancer pedatus*, Othonis Fabricii, Faun. Graen. 243, No. 221 ". Later authors have generally referred this species, just as *Cancer pedatus*, to either *Mysis mixta* Lilljeborg, 1852, or, mostly, to *Mysis oculata*.

5. Recent studies have raised doubts in me as to the correctness of the identification of *C. pedatus* as a mysid. It appears more likely that it is some kind of Euphausiacea for several reasons of which the more important are set out below.

(a) Fabricius writes " thorace laeui compresso ". The cephalothorax in the genus *Mysis* is not laterally compressed, but it is so in euphausiaceans.

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[1] The volume (Volume 3) of the *Hist. nat. gén. partic. Crust. Ins.* in which the name *Mysis* Latreille was published is dated "An X " in the French Revolutionary Calendar and has in consequence commonly been treated as having appeared in the period September 1801–September 1802. Griffin (F.J.) (1938, *J. Soc. Bibl. nat. Hist.* **1** : 157) has shown, however, that this volume was not published until "An XI " and therefore that names published in it should be dated " September 1802–September 1803 ". (Intl'd F.H.)

(b) He writes " cauda tereti recta ", but the abdomen is not straight in *Mysis*. It is somewhat bent downwards in its first part and the opposite way a little farther backwards. These bends are absent in euphausiaceans. The figures given by Fabricius in 1781 illustrate these characters very distinctly.

(c) Fabricius says that the abdomen has small, two-segmented legs. In *Mysis* they are unsegmented, except the third and fourth pleopods of the males which have quite another structure. In Euphausiacea the basis of the pleopods is two-segmented and supplied with an unsegmented exopod and endopod.

(d) Fabricius mentions *Cancer pedatus* as a whale-food and says that the species occurs " stupenda multitudine ". These facts would fit the oceanic euphausiaceans much better than the more coastal specimens of *Mysis*. Also, euphausiaceans occur abundantly in Greenland waters.

6. Matters have, however, become still more complicated since I have found that two species have been confused under the name *M. oculata*, both of which occur along the Greenland coast. One of these species it is possible to identify with *Mysis oculata* as described by Krøyer, and it would seem natural, therefore, to establish a neotype of the said species on one of Krøyer's specimens. The other species has proved to be identical to *Pugetomysis litoralis* Banner, 1948 (*Trans. Roy. Canad. Inst.* **27** (No. 57) : 104–106, pl. VI, fig. 18).

7. The specimen of *Cancer oculatus* Fabricius (O.), 1780, now selected as a neotype is described in detail in the annexe to the present paper. It is preserved in the Zoological Museum of the University of Copenhagen. Figures are given of the cephalothorax (Fig. A) and of the telson (Fig. B) of the neotype. In addition, corresponding figures are given as Figures C and D respectively of the specimen here selected as the lectotype of *Pugetomysis litoralis* Banner, 1948.

8. In order to ensure that the nomenclature of the genus *Mysis* shall remain stable, the name *pedatus* Fabricius, 1780, as published in the combination *Cancer pedatus*, should, as an unrecognisable *nomen dubium*, be suppressed under the Plenary Powers and placed on the *Official Index of Rejected and Invalid Specific Names in Zoology*. Similar action should be taken in the case of its junior objective synonym *fabricianus* Leach, 1830, as published in the combination *Megalophthalmus fabricianus*. Finally, the neotype now designated for *Cancer oculatus* Fabricius, 1780, should be validated under the Plenary Powers and the species so defined should be designated under the same Powers to be the type species of *Mysis* Latreille, [1802–1803]. The specific name *oculatus* Fabricius and the generic name *Mysis* Latreille should then be placed on the appropriate *Official Lists*.

9. Further, the name *Pugetomysis* Banner, 1948, should be put on the *Official List* with a note that it is available for use by those regarding *Mysis oculata* (O. Fabricius) and *Pugetomysis litoralis* (Banner) as generically distinct. Also, the specific name *litoralis* Banner, as thus used, should be put on the *Official List.*

10. It is desirable also that the present opportunity should be taken to dispose of the generic name *Megalophthalmus* Leach, 1830 (*Trans. Plymouth Inst.* **1** : 176), the type species of which by monotypy is the nominal species *Megalophthalmus fabricianus* Leach, 1830, the specific name of which is *nomen dubium* and has been recommended in paragraph 8 for suppression under the Plenary Powers. It is accordingly recommended that the name *Megalophthalmus* Leach, 1830, as being a name for an unrecognisable genus should be suppressed under the Plenary Powers for the purposes of the Law of Priority but not for those of the Law of Homonymy. This name should then be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*, together with the following junior homonyms :—*Megalophthalmus* Gray (G.R.), 1832 (*in* Griffith's Cuvier, *Anim. Kingd.* **14** : 371) and *Megalophthalmus* Lorenz, 1906 (*Z. deutsche geol. Ges.* **58** : 62).

11. The problems of the names on the family-group level remain to be considered. The first author to introduce such a name based on the generic name *Mysis* seems to have been Burmeister (1837, *Handb. Naturgesch.* (Abt. 2) : 566) using the spelling MYSINA as a family name. Since Burmeister adds the letters " M.E." after the family name, it would appear possible that he has got it from Milne-Edwards, but I have not succeeded in tracing any such name as used by that author. The spelling MYSIDAE was introduced by Dana (1850, *Amer. J. Sci.* (2) **9** : 129–130), and this spelling seems to be the correct one, adding the termination " -idae " to the stem of the generic name *Mysis.* The spelling MYSIDAE has been generally accepted.

12. For the reasons set out in the present application the International Commission on Zoological Nomenclature is asked :—

(1) to use its Plenary Powers :—

(a) to suppress the under-mentioned names for the purposes of the Law of Priority, but not for those of the Law of Homonymy :—

(i) the specific name *pedatus* Fabricius (O.), 1780, as published in the combination *Cancer pedatus* [a *nomen dubium*] ;

(ii) the specific name *fabricianus* Leach, 1830, as published in the combination *Megalophthalmus fabricianus* (a junior objective synonym of the name specified in (i) above) ;

(iii) the generic name *Megalophthalmus* Leach, 1830 [of which the type species is *Megalophthalmus fabricianus* Leach, 1830], a nominal species, the specific name of which it is proposed under (a)(ii) above should now be suppressed under the Plenary Powers ;

(iv) the generic name *Megalophthalmus* Gray (G.R.), 1832 (a junior homonym of *Megalophthalmus* Leach, 1830) ;

(v) the generic name *Megalophthalmus* Lorenz, 1906 (a junior homonym of *Megalophthalmus* Leach, 1830) ;

(b) to validate the neotype for the nominal species *Cancer oculatus* Fabricius (O.), 1780, designated in the Annexe to the present application ;

(c) to set aside all type selections for the nominal genus *Mysis* Latreille, [1802–1803], made prior to the Ruling now asked for, and, having done so, to designate the nominal species *Cancer oculatus* Fabricius (O.), 1780, as defined in (b) above, to be the type species of the above genus ;

(2) to place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—

(a) *Mysis* Latreille, [1802–1803] (gender : feminine) (type species, by designation under the Plenary Powers, as proposed in (1)(c) above : *Cancer oculatus* Fabricius (O.), 1780, as proposed to be defined under the Plenary Powers in (1)(b) above) ;

(b) *Pugetomysis* Banner, 1948 (gender : feminine) (type species, by monotypy : *Pugetomysis litoralis* Banner, 1948, as interpreted by the lectotype selected in paragraph 7 of the present application) (for use by those specialists who consider that the nominal species *Pugetomysis litoralis* Banner, 1948, and *Cancer oculatus* Fabricius, 1780 (type species of *Mysis* Latreille, [1802–1803]) are not congeneric with one another) ;

(3) to place the under-mentioned specific names on the *Official List of Specific Names in Zoology* :—

(a) *oculatus* Fabricius (O.), 1780, as published in the combination *Cancer oculatus* and as proposed in (1)(b) above to be defined under the Plenary Powers (specific name of type species of *Mysis* Latreille, [1802–1803]) ;

(b) *litoralis* Banner, 1948, as published in the combination *Pugetomysis litoralis*, and as defined by the lectotype specified in (2)(b) above (specific name of type species of *Pugetomysis* Banner, 1948) ;

(4) to place the under-mentioned specific names on the *Official Index of Rejected and Invalid Specific Names in Zoology* :—

(a) *pedatus* Fabricius (O.), 1780, as published in the combination *Cancer pedatus*, as proposed in (1)(a)(i) above to be suppressed under the Plenary Powers ;

(b) *fabricianus* Leach, 1830, as published in the combination *Megalophthalmus fabricianus*, as proposed in (1)(a)(ii) above to be suppressed under the Plenary Powers ;

(5) to place the under-mentioned generic name on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

Megalophthalmus Leach, 1830, as proposed in (1)(a)(iii) above to be suppressed under the Plenary Powers ;

(6) to place the under-mentioned family-group name on the *Official List of Family-Group Names in Zoology* :—

MYSIDAE (correction of MYSINA) Burmeister, 1837 (type genus : *Mysis* Latreille, [1802–1803]) (first published in correct form as MYSIDAE by Dana (1850)) ;

(7) to place the under-mentioned family-group name on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* :—

MYSINA Burmeister, 1837 (type genus ; *Mysis* Latreille, [1802–1803]) (an Invalid Original Spelling for MYSIDAE).

ANNEXE

Neotype of " Mysis oculata " (O. Fabricius) 1780

(Figs. A and B)

Description : Carapace produced in front as a rounded angle.

Eyes : large.

Antennular peduncle : with the third segment about half as long as the first one, the second about half the length of the third.

Antennal scale : about five to six times as long as broad, setose all round ; apex rounded ; a slight distal suture is present ; peduncle of flagellum about half the length of the scale ; on the distal outer corner of the sympod there is a spine.

Labrum : not drawn out anteriorly to a spine.

Maxilla : with the distal segment of the endopod expanded ; the distal margin armed with a dense row of strong barbed spines, all of which are of about the same length. Along this row of spines, on the proximal side of the segment, there is a row of setae, four or five in number.

Second maxillipede : with the distal segment of the endopod rounded, armed with strong barbed spines or claws leaving proximally an unarmed portion of only about one-fifth of the segment ; also supplied with long setae.

Third to eighth thoracic limbs : with carpopropodus divided into eight to nine segments, armed with strong barbed spines and long setae ; basal plate of exopod with a short and stout spine at the outer distal corner.

Uropod : inner margin of the endopod with five to nine spines, the proximal ones near to the statocyst and the distal one about one-third the length of the endopod from the apex.

Telson : lateral margins armed with more than twenty spines, evenly distributed along the whole margin and not leaving any unarmed portion distally ; distal to the base of the apical cleft there are four to eight spines, less numerous in small specimens as is usual with spines in mysids ; the proximal end of the apical cleft evenly rounded ; the angle of the cleft measures about 2°–50° being broadest in small animals (386 specimens investigated, 27.5–4 mm.) ; the distal lobes of the telson are broad quite to the apex, distally evenly rounded ; the two chromatophores are situated about one-third the length of the telson from the base, only occasionally they are irregularly placed. See also note in explanation of Figure B on page 60.

Length of adults : 15–28 mm.

Neotype : adult ♀ 20 mm.((Zool. Mus., Copenhagen, Denmark).

Label inside the tube containing Neotype : The following label[2] has been placed in tube containing the Neotype :—

Godhavn. Fra Maven af Gadus ogek 17/5 62 Olrik. Studssml. ded.

Mysis oculata (O. FABRICIUS) sensu KRØYER. Neotype. Ch. Holmquist.

Remarks

The characters most significant for distinguishing the two species *Mysis oculata* (Fabricius, 1780) and *Pugetomysis litoralis* Banner, 1948, which have hitherto been confused are : the form and armature of the telson, the form of the front margin of the carapace, the somewhat larger eyes in *M. oculata*, and the differences in the armature of the endopod of the second maxillipedes. *Mysis oculata* seems on the whole to be much more strongly armed than *M. litoralis*. The two species are found mostly in localities of somewhat different kinds. When they are found together the members of the one species are usually much more frequent than those of the other species.

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[2] The following amplified translation of the label placed in the tube containing the neotype has been kindly furnished by Dr. Henning Lemche of the Universitetets Zoologiska Museum, Copenhagen, the Institution in which the specimen is preserved :—

Godhavn. From the stomach of *Gadus ogak*, 17/5–62. Olrik [the collector of the sample in question]. Formerly part of the collection used for teaching students at the University of Copenhagen

Mysis oculata (O. FABRICIUS) sensu KRØYER. Neotype. Ch. Holmquist

Explanation of Figures (1) and (2)

Fig. (1) Facsimile reproductions from Fabricius (O.), 1780, Faun. groenl.

Cancer oculatus : 2 figs. published by Fabricius as Fig. 1, A and B.

Fig. (2) Facsimile reproductions from Fabricius (O.), 1781, K. Danske Vid Selsk. Skr. (n.s.), vol. 1

Cancer pedatus : 2 figs. published by Fabricius as Fig. 1, A and B.

Cancer oculatus : 2 figs. published by Fabricius as Fig. 2, A and B.

(*Note* : The above facsimile reproductions are of approximately the same size size as when the figures were published by Fabricius.)

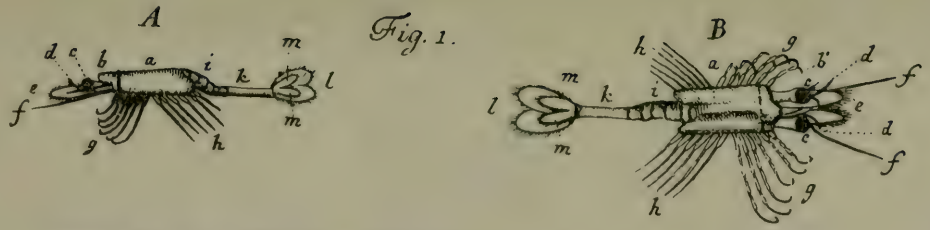


Figure (1) : Facsimile reproduction of a figure numbered Fig. 1, A and B from Fabricius, 1780

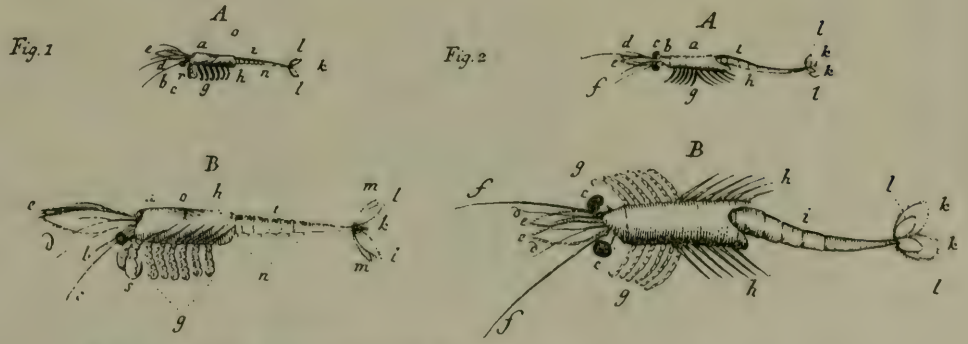


Figure (2) : Facsimile reproduction of two figures numbered Fig. 1, A and B and Fig. 2, A and B respectively from Fabricius, 1781

Explanation of Figures A to D

(drawings by Ch. Holmquist)

Figs. A and B : " Cancer oculatus " Fabricius (O.), 1780

(= *Mysis oculata* (Fabricius (O.), 1780))

(preparations made from the neotype specimen)

Fig. A Cephalothorax

Fig. B Telson

Note : The telson of this species bears two chromatophores similar to those present in *Mysis litoralis* (Banner, 1948) (Fig. D below). In old specimens, however, these structures are often dissolved and this is what has occurred in the case of the Neotype of *Mysis oculata* (Fabricius (O.), 1780). It is for this reason that these structures are not shown in Fig. B.

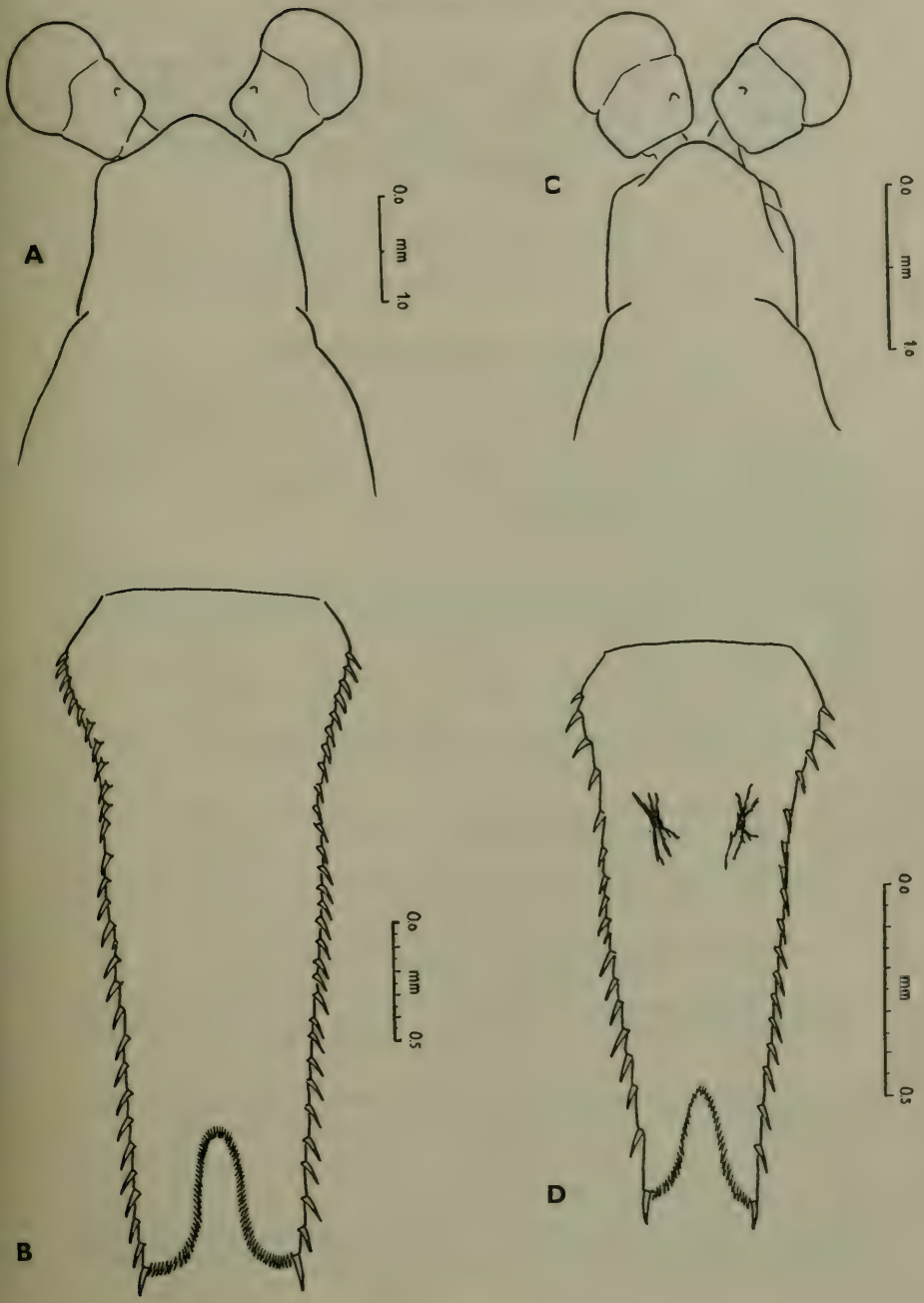
Figs. C and D : " Pugetomysis litoralis " Banner, 1948

(= *Mysis litoralis* (Banner, 1948))

(preparations made from the lectotype specimen)

Fig. C Cephalothorax

Fig. D Telson



Figs. A and B : *Mysis oculata* (Fabricius (O.), 1780)
Figs. C and D : *Mysis litoralis* (Banner, 1948)

(For explanation see page opposite.)

PROPOSED ADDITION TO THE "OFFICIAL LIST OF FAMILY-GROUP NAMES IN ZOOLOGY" OF CERTAIN FAMILY-GROUP NAMES FOR AMMONOIDEA, GENERALLY ACCEPTED IN CORRECTED FORM BUT ORIGINALLY MIS-SPELT OR INCORRECTLY FORMED

By **W. J. ARKELL**, M.A., D.Sc., F.R.S.

(*Cambridge University, Sedgwick Museum, Cambridge*)

(Commission Reference : Z.N.(S.) 954)

A. Hyatt, one of the first students of Ammonoidea to split up the old comprehensive genus *Ammonites*, founded a number of genera on which, at the same time or later, he erected families. He erected also some families erected on previously-named genera.

2. The following six family-group names introduced by Hyatt (A.) were not in the first instance correctly formed on the stem of the name of the type genus, but were published with one exception in a shortened form :—

(a) ARIETIDAE Hyatt, 1875, *Proc. Boston Soc. nat. Hist.* **17** : 225 (type genus *Arietites* Waagen, 1869) ;

(b) AMALTHEOIDAE Hyatt, 1867, *Bull. Mus. comp. Zool.* **1** (No. 5) : 89 (type genus : *Amaltheus* Montfort, 1808) ;

(c) DACTYLOIDAE Hyatt, 1867, *Bull. Mus. comp. Zool.* **1** (No. 5) : 87, 94 (type genus : *Dactylioceras* Hyatt, 1867) ;

(d) OXYNOTIDAE Hyatt, 1875, *Proc. Boston Soc. nat. Hist.* **17** : 230 (type genus : *Oxynoticeras* Hyatt, 1875) ;

(e) PHYMATOIDAE Hyatt, 1867, *Bull. Mus. comp. Zool.* **1** (No. 5) : 88 (type genus : *Phymatoceras* Hyatt, 1867) ;

(f) PLEURACANTHITIDAE Hyatt, 1900, *in* Zittel's *Textb. Palaeont.* (ed. C. R. Eastman) : 568 (type genus : *Pleuroacanthites* Canavari, 1883).

3. In the same category are the two following family-group names published by Haug (E.) either in a shortened or otherwise incorrect form :—

(a) POLYMORPHIDAE Haug (E.), 1887, *Neues Jahrb. Min.* 1887, **2** : 89 (type genus : *Polymorphites* Haug, 1887) ;

(b) HOLCOSTEPHANIDAE Haug, 1910, *Traité Géol.* **2** (Pt. 2) : 1167 (type genus : *Olcostephanus* Neumayr, 1875).

4. All these family names have been accepted by nearly all authors, with attribution to Hyatt or Haug respectively, and with priority from the date of their first introduction by Hyatt or Haug. Some authors when so using the family names have silently corrected them to conform to modern standards of nomenclatural precision, but usually have not altered the attribution or the date of introduction for purposes of priority.

5. The corrected name " ARIETITIDAE (correction of ARIETIDAE) Hyatt, 1875 " has already been placed on the *Official List* by *Direction* 14 of the International Commission (*Ops. Decls. int. Comm. zool. Nomencl.* **10** : 463–480).

6. In order to avoid the unnecessary disturbance to accepted nomenclature which would result from the loss of priority and change of authorship of these names if they came to be attributed in future to the various authors who first published the corrected forms, it is hereby proposed to add the following seven family-group names to the *Official List of Family-Group Names in Zoology* :—

(1) AMALTHEIDAE (correction of AMALTHEOIDAE) Hyatt, 1867 (type genus : *Amaltheus* Montfort, 1808) ;

(2) DACTYLIOCERATIDAE (correction of DACTYLOIDAE) Hyatt, 1867 (type genus : *Dactylioceras* Hyatt, 1867) ;

(3) OXYNOTICERATIDAE (correction of OXYNOTIDAE) Hyatt, 1875 (type genus : *Oxynoticeras* Hyatt, 1874) ;

(4) PHYMATOCERATINAE (correction of PHYMATOIDAE) Hyatt, 1900 (type genus : *Phymatoceras* Hyatt, 1867) ;

(5) PLEUROACANTHITIDAE (correction of PLEURACANTHITIDAE) Hyatt, 1900 (type genus : *Pleuroacanthites* Canavari 1883) ;

(6) POLYMORPHITIDAE (correction of POLYMORPHIDAE) Haug, 1887 (type genus : *Polymorphites* Haug, 1887) ;

(7) OLCOSTEPHANIDAE (correction of HOLCOSTEPHANIDAE) Haug, 1910 (type genus : *Olcostephanus* Neumayr, 1875).

7. At the same time it is proposed to place the names of the type genera of the foregoing family-group taxa on the *Official List of Generic Names in Zoology* and to place on the *Official List of Specific Names in Zoology* the specific

names of the type species of the genera in question. The names concerned, with their original references, are as follows :—

(a) *Amaltheus* Montfort, 1808, *Conch. syst. Class. méth. Coquilles* **1** : 90 (gender : masculine) (type species, by original designation : *Amaltheus margaritatus* Montfort, 1808, *Conch. syst. Class. méth. Coquilles* **1** : 91) ;

(b) *Dactylioceras* Hyatt, 1867 : [The question of the type species for this genus forms the subject of a separate application which is being submitted to the International Commission by Mr. P. C. Sylvester-Bradley[1].] ;

(c) *Oxynoticeras* Hyatt (A.), 1875, *Proc. Boston Soc. nat. Hist.* **17** : 230 (gender : neuter) (type species, by selection by Buckman (S.S.) (1909, *Yorkshire Type Ammonites* **1** : *ii*) : *Ammonites oxynotus* Quenstedt (F.A.), 1843, *Floezgeb. Wurtemb.* : 161) ;

(d) *Phymatoceras* Hyatt (A.), 1867, *Bull. Mus. comp. Zool.* **1** (No. 5) : 88 (gender : neuter) (type species, by monotypy : *Phymatoceras robustum* Hyatt (A.), 1867, *Bull. Mus. comp. Zool.* **1** (No. 5) : 88) [Note for inclusion in the *Official List* : The nominal species which is the type species of this genus is interpreted by some authors as being the young of *Ammonites tirolensis* von Hauer, 1856 (*Denkschr. k. Akad. Wiss.*, Math.-Nat. Kl. **11** : 41, pl. vii, figs. 1–3) as interpreted by the description and figure given by Dumortier (E.), 1874, *Et. paléont. Dépots Jurass. Bassin Rhône* **4** : 86, pl. xxiv, figs. 1, 2) ;

(e) *Pleuroacanthites* Canavari, 1883, *Atti. Soc. toscana.* Proc. verb. **3** : 279 (gender : masculine) (type species, by selection by Haug (E.) (1889, *Annu. géol. univ.* **5** (for 1888) : 1057) : *Ammonites biformis* Sowerby (J. de C.), 1831, *in* de la Beche, *Geol. Man.* : 319) ;

(f) *Polymorphites* Haug (E.), 1887, *Neues Jahrb. Min.* Beil.-Band. **2** : 107, 120 (gender : masculine) (type species, by selection by Buckman (S.S.) (1892, *Mon. Inf. Ool. Amm. Brit. Isls*, Palaeont. Soc., Part **6** : 267) : *Ammonites polymorphus* Quenstedt (F.A.), 1845, *Petref. Deutschl.* : 86 [as nom. nud. on p. 75]) ;

(g) *Olcostephanus* Neumayr (M.), 1875, *Z. dtsch. geol. Ges.* **27** : 922 (gender : masculine) type species, by original designation : *Ammonites astierianus* d'Orbigny, 1840, *Pal. franc.*, Terr. crét. **1** : 115).

8. As a corollary, the following family-group names, each of which is an Invalid Original Spelling for one or other of the names specified in paragraph 6

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[1] See Postscript by myself annexed at the end of the present paper. F.H. 28th Jan. 1958.

above, should be placed on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* :—

(1) AMALTHEOIDAE Hyatt, 1867

(2) DACTYLOIDAE Hyatt, 1867

(3) OXYNOTIDAE Hyatt, 1875

(4) PHYMATOIDAE Hyatt, 1900

(5) PLEUROACANTHITIDAE Hyatt, 1900

(6) POLYMORPHIDAE Haug, 1887

(7) HOLCOSTEPHANIDAE Haug, 1910

9. The action which the International Commission is now asked to take is namely :—

(1) to place the seven family-group names specified in paragraph 6 of the present application on the *Official List of Family-Group Names in Zoology* ;

(2) to place on the *Official List of Generic Names in Zoology* the names of the seven genera specified in paragraph 7 of the present application, each of which, as shown in paragraph 6, is the type genus of a family-group taxon, the name of which it is proposed in (1) above to place on the *Official List* of names for taxa of the family-group category ;

(3) to place on the *Official List of Specific Names in Zoology* the specific names of the nominal species specified in paragraph 7 above, each of which is type species of a nominal genus specified in that paragraph, the entries so to be made on the above *Official List* to be endorsed in each case to show that the nominal species bearing the specific name concerned is the type species of the nominal genus in connection with which it is cited in the said paragraph ;

(4) to place on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* the seven family-group names specified in paragraph 8 of the present application, each of which is an Invalid Original Spelling for one or other of the family-group names referred to in (1) above.

Postscript by the Secretary : One of the family-group names included by Dr. Arkell in this application, DACTYLIOCERATIDAE (correction of DACTYLOIDAE) Hyatt (A.), 1867, was the subject of identical recommendations submitted almost simultaneously by Mr. P. C. Sylvester-Bradley (File Z.N.(S.) 956). The two authors have asked that these applications should be co-ordinated by the

Office of the Commission prior to being published. Of the proposals concerned that by Mr. Sylvester-Bradley was the more detailed and it has accordingly been decided to treat his application in regard to the above name and the names associated with it as the substantive application on which in due course the Commission will be asked to vote. Under this arrangement the proposals in Dr. Arkell's paper regarding (a) the family-group name DACTYLIOCERATIDAE and its Invalid Original Spelling DACTYLOIDAE, (b) the generic name *Dactylioceras* Hyatt, and (c) the specific name *communis* Sowerby (J.), 1815, as published in the combination *Ammonites communis*, will be excluded from consideration when his paper is submitted to the Commission for vote, all those proposals having (as explained above) been included in the application by Mr. Sylvester-Bradley which will be submitted for vote at the same time as the more extensive proposals set out in Dr. Arkell's application. (signed) Francis Hemming, *Secretary to the International Commission on Zoological Nomenclature*, 28th January 1958.

SUPPORT FOR THE APPLICATION REGARDING THE NAME "PALAEMON ADSPERSUS" RATHKE, 1837 (CLASS CRUSTACEA, ORDER DECAPODA)

By **J. C. YALDWYN**

(*Victoria University of Wellington, Wellington, New Zealand*)

(Commission Reference : Z.N.(S.) 446)

(For the applications submitted see *Bull. zool. Nomencl.* **13** : 142–153 ; *ibid.* **13** : 294–296)

(Letter dated 5th February 1958)

I have recently received a copy of Dr. L. B. Holthuis' application to the International Commission on Zoological Nomenclature, reference Z.N.(S.) 446. I would very much like the opportunity of commenting on this proposal.

I fully agree with Dr. Holthuis' proposals on the *Leander*/*Palaemon* and *squilla*/*adspersus* problems, and also his later proposal (*Bull. zool. Nomencl.* **13** : 294–296) on the suppression of the totally overlooked *Palaemon communis*. I have no other comment to add except to say that I think his ideas are the only ones we can possibly accept now, and in fact I think until we do accept them there will be no stability at all in this common genus.

PROPOSED USE OF THE PLENARY POWERS TO DESIGNATE A TYPE SPECIES FOR THE GENUS "DACTYLIOCERAS" HYATT, 1867 (CLASS CEPHALOPODA, ORDER AMMONOIDEA : JURASSIC) IN HARMONY WITH ACCUSTOMED USAGE

By **P. C. SYLVESTER-BRADLEY**

(*University of Sheffield, England*)

(Commission Reference : Z.N.(S.) 956)

The purpose of the present application is to ask the International Commission to use its Plenary Powers to designate for the genus *Dactylioceras* Hyatt, 1867 (Class Cephalopoda, Order Ammonoidea) a type species in harmony with accustomed usage, and thus prevent a change in the name of one of the best known Jurassic ammonites in the world.

2. In 1867 Hyatt proposed the name *Dactylioceras* for four species of ammonite listed in the following order : *Ammonites communis* Sowerby, *A. holandrei* d'Orbigny, *A. annulatus* Sowerby and *A. braunianus* d'Orbigny (Hyatt, 1867 : 95). On account of its excellent preservation in large numbers in the Upper Lias, the genus has become one of the best known of all Jurassic ammonite genera. Specimens of *Dactylioceras* feature frequently in elementary teaching collections as typical of the whole group of ammonites.

3. In 1911 Buckman selected *A. annulatus* Sowerby as type species of the genus (Buckman, 1911 : *v*).

4. Sowerby (J.) (1819 : 41, 42 ; pl. 222) on introducing the species *A. annulatus* figured and described four specimens. One of these (fig. 5) was chosen by Oppel (1856 : 255) as lectotype.

5. All four syntypes are now in the British Museum (Natural History). The lectotype is a thick-whorled specimen which is subjectively identifiable with *Ammonites crosbeyi* Simpson, 1843. This species has never been regarded a member of the genus *Dactylioceras*. It has variously been referred to *Coeloceras* Hyatt, 1867, *Catacoeloceras* Buckman, 1923 and *Nodicoeloceras* Buckman, 1926.

6. In spite of the existence of the lectotype, that specimen has never yet been used to interpret the species *A. annulatus*. No figure of the lectotype has been published since that of Sowerby (1818).

7. Buckman interpreted the species *A. annulatus* from a specimen he figured in his *Type Ammonites* (1927 : pl. 700) which is neither conspecific nor congeneric with the lectotype.

8. The other three syntypes of *A. annulatus* are not of the same species or genus as the lectotype, nor do they themselves represent a single species according to present-day concepts.

9. Despite Oppel's formal selection of a lectotype, one of these syntypes (pl. 222, fig. 2, from Whitby) was for many years regarded as " typical " of the species *A. annulatus*. Consequently this name was used before 1910 for a species which is now known as *Dactylioceras tenuicostatum* (Young & Bird). It was presumably this interpretation of the species *Ammonites annulatus* that was intended by Hyatt when he listed the name under *Dactylioceras*. It is certainly one of the commonest species of the genus as it has so far been understood. However, study of the syntype in question shows that it has been wrongly interpreted. In the present author's opinion it is a member of the species *A. semicelatus* Simpson, not *A. tenuicostatus* Young & Bird.

10. The genus *Dactylioceras* as currently understood embraces, amongst many others, the species now known as *D. tenuicostatum* (Young & Bird) (olim " *D. annulatum* "), the specimen misidentified by Buckman (1927) as *D. annulatum*, the three other species listed by Hyatt (1867) as members of the genus (*D. commune*, *D. holandrei* and *D. braunianum*) and the three syntypes of *A. annulatus*, but not the species *A. annulatus* as interpreted by the lectotype.

11. Buckman (1926–1927 : 41–46) split up the Upper Liassic members of the family DACTYLIOCERATIDAE into a large number (29) of genera, many of which are now regarded as subjective junior synonyms of *Dactylioceras*. (See, for example, Donovan, 1954 : 5.) Of the species listed by Hyatt under *Dactylioceras*, *A. communis* was made type of the genus *Koinodactylites* Buckman, 1927, *A. braunianus* type of *Zugodactylites* Buckman, 1926, and *A. holandrei* was referred to the genus *Arcidactylites* Buckman, 1926. In addition to these, the species *A. tenuicostatus* (which, as we have seen, was for long a species that went under the name of *D. annulatum*) was made type of the genus *Tenuidactylites* Buckman, 1926, and *A. semicelatus* (with which one of Sowerby's syntypes is subjectively identified) was made the type species of the genus *Kryptodactylites* Buckman, 1926. All of these so-called genera are currently regarded as synonyms of *Dactylioceras*.

12. In order to preserve the name *Dactylioceras* for the group of ammonites which it has always been used to designate, it will be necessary to invoke the Plenary Powers either to set aside Oppel's selection of a lectotype for *A. annulatus*, or to set aside Buckman's designation of *A. annulatus* as type of the genus.

13. Of these alternative courses, the first would be likely to lead to confusion since the name *A. annulatus* has, pending a more adequate description of the lectotype, passed out of current usage. To resurrect the name to indicate a common or well known species (e.g. either of those now known as *D. tenuicostatum* or *D. semicelatum*) would lead to name changes of the most objectionable type. Fortunately Oppel's designated lectotype represents a rare species, and its subjective identification with *A. crosbeyi* Simpson, if confirmed, would not necessitate more than the suppression of the specific name *crosbeyi* as a junior subjective synonym. This name has never been well known or widely used.

14. The second alternative, the substitution of another species as type species of the genus *Dactylioceras*, would lead to no name changes. One of Buckman's generic names would become a junior objective synonym of *Dactylioceras* instead of a junior subjective synonym, as at present.

15. Of the four original species listed by Hyatt under *Dactylioceras*, and which therefore form syntype-species, the best known and most abundant, and the species most often regarded as "typical" of *Dactylioceras* is *A. communis*. The two syntypes of this species are preserved in the British Museum (Natural History). Photographs of one of these (Brit. Mus., Sowerby coll., No. 43895a) have been published by Crick (1910 : 145, fig. 1) and by Arkell (1956, pl. 33, figs. 4a, 4b), and this specimen has been designated as the lectotype by Arkell (1956 : 764).

16. If *A. communis* becomes type species of *Dactylioceras*, the name *Koinodactylites* Buckman, 1927, will become a junior objective synonym, as it has the same type species.

17. The family DACTYLIOCERATIDAE is based on the genus *Dactylioceras*. It was first proposed by Hyatt in 1867 in the incorrect form "DACTYLOIDAE" (Hyatt, 1867 : 87, 94).

18. In view of the foregoing facts, I now request the International Commission :—

(1) to use its Plenary Powers (a) to set aside all type-selections for the genus *Dactylioceras* Hyatt, 1867, made prior to the Ruling now asked for, and (b), having done so, to designate *Ammonites communis* Sowerby (J.), 1815, as the type species of the foregoing genus ;

(2) to place the name *Dactylioceras* Hyatt, 1867 (gender : neuter) (type species, by designation under the Plenary Powers under (1) (b) above : *Ammonites communis* Sowerby (J.), 1815) on the *Official List of Generic Names in Zoology* ;

(3) to place the under-mentioned generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

(a) *Koinodactylites* Buckman, 1927 (a junior objective synonym of *Dactylioceras* Hyatt, 1867, the two genera each having *Ammonites communis* Sowerby (J.), 1815, as type species) ;

(b) *Dactyloceras* Fischer, 1879 (*J. Conchyliol.* **27** : 254) (an Erroneous Subsequent Spelling for *Dactylioceras* 1867) ;

(4) to place the specific name *communis* Sowerby (J.), 1815, as published in the combination *Ammonites communis*, as interpreted by the lectotype designated and figured by Arkell (W.J.) (1956) (specific name of type species of *Dactylioceras* Hyatt, 1867), on the *Official List of Specific Names in Zoology* ;

(5) to place the name DACTYLIOCERATIDAE (correction by Smith, 1913, (as DACTYLIOCERATINAE) of DACTYLOIDAE) Hyatt, 1867 (type genus : *Dactylioceras* Hyatt, 1867) on the *Official List of Family-Group Names in Zoology* ;

(6) to place the name DACTYLOIDAE Hyatt, 1867 (an Invalid Original Spelling for DACTYLIOCERATIDAE) on the *Official Index of Rejected and Invalid Family-Group Names in Zoology.*

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PROPOSED USE OF THE PLENARY POWERS TO VALIDATE THE SPECIFIC NAME " GEMMASCENS " ESPER, [1794], AS PUBLISHED IN THE COMBINATION " MADREPORA GEMMASCENS " (CLASS HYDROZOA, ORDER STYLASTERINA)

By **H. BOSCHMA**

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(Commission Reference : Z.N.(S.) 950)

The purpose of the present application is to ask the International Commission on Zoological Nomenclature to use its Plenary Powers to validate the specific name *gemmascens* Esper, [1794], as published in the combination *Madrepora gemmascens*, by suppressing the specific name *gemmascens* Wilkens, 1787, as published in the same combination.

2. Houttuyn (1772, *Nat. Hist. Linn.* **1**(17) : 169) used the name " Dopjes-Koraal " for a madreporarian coral of the family OCULINIDAE, which, judging by the figure, to all appearances belongs to the genus *Amphelia*. Müller (P.L.S.) (1775, *Linné vollständ Natursyst.* 6(2) : 705) copied Houttuyn's figure and used the name " Knospencorall ". Wilkens (1787, *in* Pallas, *Charakteristic Thierpflanzen* **2** : 144) described the coral as *Madrepora gemmascens*, the characters being taken from Houttuyn and Müller. A short characterization of the coral appeared in Gmelin ([1791], *Syst. Nat.* (ed. 13) **1**(6) : 3781) and in Bosc (1802, *Hist. nat. Vers* **2** : 281) ; not a single reference was to be found in later literature.

3. Esper ([1794], *Die Pflanzenthiere*, Forts. **1**(2) : 60) described a stylasterine coral from East Indian seas as *Madrepora gemmascens*. This coral was referred to by Dana (1848, *U.S. explor. Exped.*, Zooph. : 696) as *Allopora gemmascens*, by Milne Edwards & Haime (1850, *Ann. Sci. Nat., Paris* (3) **13** : 98) as *Stylaster gemmascens*.

4. Kent (1871, *Proc. zool. Soc. Lond.* : 281) tentatively identified a Norwegian stylasterine coral with *Madrepora gemmascens* Esper ; Sars (1873, *Forh. Videnskr.-Selsk. Christiania* : 115) unhesitatingly used the name *Stylaster gemmascens* (Esper) for the Norwegian species. In later papers this name has been in constant use.

5. In a recent paper (Boschma, 1955, *Proc. K. ned. Akad. Wetensch. Amsterdam* **58**(C) : 22–31, pl. 1) it was shown that Esper's holotype which is here selected as the lectotype of *Madrepora gemmascens* is conspecific with the Norwegian coral at present constantly referred to as *Stylaster gemmascens* (Esper), while attention was drawn to the fact that it would lead to great confusion if this name were to become invalid and had to be replaced by a new one.

6. The concrete proposals which are accordingly laid before the International Commission on Zoological Nomenclature are that it should :—

(1) use its Plenary Powers to suppress the undermentioned names and usages of names for the purposes both of the Law of Priority and the Law of Homonymy :—

(a) *gemmascens* Wilkens, 1787, as published in the combination *Madrepora gemmascens* ;

(b) *gammascens*, all uses of, in the combination *Madrepora gemmascens*, subsequent to Wilkens ((1787) and prior to Esper ([1794]) ;

(2) place the undermentioned specific name on the *Official List of Specific Names in Zoology* :—

gemmascens Esper, [1794], as published in the combination *Madrepora gemmascens*, as determined by the holotype figured by Boschma (H.) (1955) ;

(3) place on the *Official Index of Rejected and Invalid Specific Names in Zoology* the names and usages of names specified in (1) above, as there proposed to be suppressed under the Plenary Powers.

REQUEST FOR A RULING AS TO THE SPECIES TO BE ACCEPTED AS THE TYPE SPECIES OF THE NOMINAL GENUS " BATHYLAGUS " GÜNTHER (A.C.L.G.), 1878 (CLASS PISCES)

By **W. I. FOLLETT**

(*California Academy of Sciences, San Francisco, U.S.A.*)

and

DANIEL M. COHEN

(*University of Florida, Gainesville, U.S.A.*)

(Commission Reference : Z.N.(S.) 1279)

The object of the present application is to secure a decision from the International Commission on Zoological Nomenclature regarding the species to be accepted as the type species of *Bathylagus* Günther, 1878 (Class Pisces).

2. The generic name *Bathylagus* was published by Günther in 1878 (*Ann. Mag. nat. Hist.* (5) **2** : 248). The nominal genus so established included two nominal species, *Bathylagus antarcticus* and *Bathylagus atlanticus*, each of which was originally established in the same publication (: 248). Neither species was designated as the type species of this genus.

3. The earliest action that we have found which might possibly be considered a selection of the type species of the genus *Bathylagus* is that of Jordan & Evermann (1896a, *Bull. U.S. nat. Mus.* **47**(1) : 528), who published the following under the generic heading " 246. BATHYLAGUS, Günther " : " *Bathylagus*, Günther, Ann. Mag. Nat. Hist., 1878, II, 248 (*atlanticus*) ".

4. Jordan & Evermann (1896a) usually placed a single specific name in parentheses immediately after their reference to the original publication of the generic name. However, in several instances they placed two or more specific names within the parentheses (e.g. *Mustelus*, page 28 ; *Squalus*, page 53 ; *Aëtobatus*, page 88 ; *Leuciscus*, page 228 ; *Carapus*, page 340 ; *Heterandria*, page 686 ; *Syngnathus*, page 774 ; *Polynemus*, page 828 ; *Caranx*, page 915 ; *Bodianus*, page 1143).

5. Nowhere did Jordan & Evermann (1896a) explicitly state whether the single specific name that they usually placed in parentheses immediately after their reference to the original publication of a generic name was intended as their selection of the type species.

6. In several instances Jordan & Evermann (1896a) wrote " no type indicated ", or similar words, in place of (or in addition to) the specific name in parentheses, as follows :

(Page 228) " *Phoxinus*, Rafinesque, Ich. Oh., 45, 1820. (No type stated ; *phoxinus* understood.) "

(Page 228) " *Dobula*, Rafinesque, Ich. Oh., 45, 1820. (No type mentioned ; *dobula* understood.) "

(Page 228) " *Leuciscus*, Rafinesque, *l. c.* 45. (No type mentioned ; *leuciscus* understood.) "

(Page 243) " *Rutilus*, Rafinesque, Ich. Oh., 48, 50, 1820. (*rutilus* : no type indicated on page 48 ; on page 50, *rutilus* mentioned.) "

(Page 353) " *Ariosoma*, Swainson, Nat. Hist., Class'n Fishes, I, 220, 1838. (No type mentioned ; diagnosis worthless.) "

(Page 625) " *Esox*, Artedi, Genera Piscium, 14, 1738 (in part, three species : The Pike, Garfish, and Gar Pike ; no type indicated, but the Pike was to Artedi the best-known species) ".

(Page 789) " *Membras*, Bonaparte, Fauna Italica, 1836 (no type indicated) ".

(Page 796) " *Menidia*, Bonaparte, Fauna Italica, about 1836 (no type indicated, *menidia* doubtless intended) ".

7. Where Jordan & Evermann (1896a) established a new nominal genus (*Verma* : 374 ; *Tarpon* : 409 ; *Jenkinsia* : 418 ; *Anchovia* : 449 ; *Mitchillina* : 453 ; *Nansenia* : 528 ; *Vinciguerria* : 577 ; *Valenciennellus* : 577 ; *Cololabis* : 726 ; *Lethostole* : 792 ; *Kirtlandia* : 794 ; *Eurystole* : 802 ; *Bipinnula* : 878 ; *Psychromaster* : 1099 ; *Copelandellus* : 1100 ; *Ocyanthias* : 1227), they invariably placed a single specific name in parentheses immediately after the words " new genus ", without explanation.

8. Where Jordan & Evermann (1896a) established a new nominal subgenus (*Haustor* : 135 ; *Iotichthys* : 228 ; *Opsopoea* : 247 ; *Orcella* : 254 ; *Yuriria* : 314 ; *Scutica* : 403 ; *Lile* : 428 ; *Spirinchus* : 522 ; *Kenoza* : 625 ; *Fontinus* : 633 ; *Gambusinus* : 633 ; *Palometa* : 965 ; *Swainia* : 1039 ; *Torrentaria* : 1066 ; *Nivicola* : 1066 ; *Rafinesquiellus* : 1066 ; *Claricola* : 1066 ; *Enneistus* : 1143 ;

Archoperca : 1169 ; *Xystroperca* : 1169), with one exception they invariably placed a single specific name in parentheses immediately after the words " new subgenus " or " subgen. nov.", without explanation. The one exception is that of *Azteca* (: 254), where they placed two specific names, " *vittata* = *aztecus* ", in parentheses immediately after the words " new subgenus ", without explanation.

9. In their preface Jordan & Evermann (1896a : VI) stated, " The present work is, in a sense, a revision of the ' Synopsis of the Fishes of North America ', published in 1883 by Jordan & Gilbert as Bulletin 16 of the United States National Museum ". In the " Synopsis of the Fishes of North America ", Jordan & Gilbert had invariably written the word " type " before the name of the single species that they cited in their reference to the original publication of each generic name. For example, under the generic heading " 118.—*Elops* Linnaeus ", Jordan & Gilbert (1883 : 261) wrote as follows : " (Linnaeus, Syst. Nat. : type *Elops saurus* L.) ".

10. In the foregoing circumstances, and bearing in mind the requirement Rule (g) in Article 30 that " The meaning of the expression ' select the type ' is to be rigidly construed ", we request the International Commission to rule that Jordan & Evermann (1896a : 528) did not select *Bathylagus atlanticus* as the type species of the nominal genus *Bathylagus* Günther, 1878.

11. If the International Commission rules as requested in paragraph 10, *supra*, the next earliest action that we have found which might possibly be regarded as a selection of the type species of the genus *Bathylagus* must be considered. It is contained in a paper published later in the same year by Jordan & Evermann ([1896]), *Rept. U.S. Comm. Fish and Fish.* **21** : 295, and is set forth under the generic heading " Genus 247. BATHYLAGUS Günther ", as follows : " *Bathylagus* Günther, Ann. Mag. Nat. Hist., II, 1878, 248 (*atlanticus*) ".

12. In their preface to this later work Jordan & Evermann (1896 : 210) wrote as follows : " The name in parenthesis following the reference to the generic name is that of the species taken by the describer as the type of the genus ".

13. In view of the foregoing statement that the name in parentheses is that of the species " taken by the describer " as the type, we doubt that the parenthetical name *atlanticus* (when " rigidly construed ") sufficiently demonstrates a selection of type by Jordan & Evermann themselves. Accordingly, we request the International Commission to rule that Jordan & Evermann (1896 : 210, 295) did not select *Bathylagus atlanticus* as the type species of the nominal genus *Bathylagus* Günther, 1878.

14. If the International Commission rules as requested in paragraph 13, *supra*, the next earliest action must be considered. We believe it to be that published by Jordan (1919, *Genera of Fishes* (33) : 394–395) under the heading " 1240. GÜNTHER (1878). *Preliminary Notices of Deep-Sea Fishes Collected During the Voyage of H.M.S. Challenger.* Ann. Mag. Nat. Hist., ser. 5, 11, 17–28, 179–187, 248–251 ", as follows :

" *Bathylagus* Günther, 248 ; logotype *B. antarcticus* Gthr.".

15. In part 3 of the work cited in paragraph 14 above, Jordan did not explain his use of the word " logotype ", but he had stated in part 2 of the same work, published earlier in 1919, as follows (page 165) : " A *logotype* is one selected by the ' First Reviser'."

16. Although Jordan did not state that in this instance he himself was the " First Reviser ", we doubt that it was necessary for him to do so, since he suggested nothing to the contrary. Accordingly, we request the International Commission to rule that Jordan (1919, *Genera of Fishes*, (3) : 395) selected *Bathylagus antarcticus* as the type species of the nominal genus *Bathylagus* Günther, 1878.

17. If, as we hope that International Commission shares our view that the type species of *Bathylagus* Günther is *Bathylagus antarcticus* of the same author, we would ask that this generic name be placed on the *Official List of Generic Names in Zoology* and that the specific name *antarcticus* Günther, 1878, as published in the combination *Bathylagus antarcticus*, should, as the specific name of the type species of the above genus, be placed on the *Official List of Specific Names in Zoology*. In this connection we should explain that the above is a well-understood and taxonomically valid species. We have considered also whether it is desirable that the specific name *atlanticus* Günther, 1878, as published in the combination *Bathylagus atlanticus*, the name of the second of the two nominal species entering into the present case, should also under the " Completeness-of-Opinion " Rule be placed on the above *Official List*. We are of the opinion, however, that it is not desirable that this should be done, for the nominal species so named was poorly described and has never been figured and we have not had an opportunity of examining its holotype.

18. The nominal genus *Bathylagus* Günther is currently placed in the family BATHYLAGIDAE or in the family ARGENTINIDAE. The first of these names was published (in the correct form BATHYLAGIDAE) by Gill (T.N.), 1884 (*Science* **3** : 621), the second (as the name for a subfamily, in the form ARGENTININI) by Bonaparte (C.L.J.L.) in 1846 (*Cat. met. Pesci Europ.* : 25). We consider it desirable that both these names should now be placed on the *Official List of Family-Group Names in Zoology*, since the name ARGENTINIDAE is used for the genus *Argentina* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) **1** : 315) by all specialists, irrespective of whether or not they accept also the family

BATHYLAGIDAE. Since the former name was published as the name of a subfamily, it will need to be entered on the *Official List* as ARGENTININAE ; the Invalid Original Spelling ARGENTININI will need to be placed at the same time on the *Official Index of Rejected and Invalid Family-Group Names in Zoology*, with a note that, while this spelling is invalid as the spelling for a subfamily name, it is available as the name for any category within the family-group for which no prescribed termination has been laid down by the International Congress of Zoology. Finally, it will be necessary to place the generic name *Argentina* Linnaeus on the *Official List of Generic Names in Zoology* and the specific name of its type species on the *Official List of Specific Names in Zoology*. The species concerned, which is the type species by monotypy, is *Argentina sphyraena* Linnaeus, 1758 (: 315).

19. For the reasons set forth in the present application the request which we make to the International Commission is that it should :—

(1) give a Ruling that the type species of the genus *Bathylagus* Günther (A.C.L.G.), 1878, is the nominal species *Bathylagus antarcticus* Günther (A.C.L.G.), 1878, by selection by Jordan (D.S.) (1919 : 395) ;

(2) place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—

(a) *Bathylagus* Günther (A.C.L.G.), 1878 (gender : masculine) (type species, by selection by Jordan (D.S.), (1919) : *Bathylagus antarcticus* Günther (A.C.L.G.), 1878) ;

(b) *Argentina* Linnaeus, 1758 (gender : feminine) (type species, by monotypy : *Argentina sphyraena* Linnaeus, 1758) ;

(3) place the under-mentioned specific names on the *Official List of Specific Names in Zoology* :—

(a) *antarcticus* Günther (A.C.L.G.), 1878, as published in the combination *Bathylagus antarcticus* (specific name of type species of *Bathylagus* Günther (A.C.L.G.), 1878) ;

(b) *sphyraena* Linnaeus, 1758, as published in the combination *Argentina sphyraena* (specific name of type species of *Argentina* Linnaeus, 1758) ;

(4) place the under-mentioned family-group names on the *Official List of Family-Group Names in Zoology* :—

(a) BATHYLAGIDAE Gill (T.N.), 1884 (type genus : *Bathylagus* Günther (A.C.L.G.), 1878) ;

(b) ARGENTININAE (correction of ARGENTININI) Bonaparte (C.L.J.L.), 1846 (type genus : *Argentina* Linnaeus, 1758) ;

(5) place the under-mentioned family-group name on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* :—

ARGENTININI Bonaparte (C.L.J.L.), 1846 (type genus : *Argentina* Linnaeus, 1758) (an Invalid Original Spelling for ARGENTININAE but available as the name for a taxon within the family-group belonging to a category, for names of taxa in which there is no prescribed termination).

SUPPORT FOR THE APPLICATION REGARDING THE GENERIC NAME "MYSIS" LATREILLE, [1802–1803] (CLASS CRUSTACEA, ORDER MYSIDACEA)

By **HENNING LEMCHE**

(*Universitetets Zoologiske Museum, Copenhagen, Denmark*)

(Commission Reference : Z.N.(S.) 1319)

(For the application here referred to see *Bull. zool. Nomencl.* **16** : 51–61)

(Letter dated 7th March 1958)

The name *Mysis* is so generally known and used by marine biologists, both as a generic name and as the basis of family- and ordinal names, that its disappearance for purely technical reasons would certainly be felt by many to constitute a blow to the authority of the Rules of Nomenclature.

SUPPORT FOR W. J. ARKELL'S PROPOSAL FOR THE ADDITION TO THE " OFFICIAL LIST OF FAMILY-GROUP NAMES IN ZOOLOGY " OF CERTAIN NAMES PUBLISHED BY HYATT (A.) AND HAUG (E.) RESPECTIVELY

(Commission Reference : Z.N.(S.) 954)

(a) By **P. C. SYLVESTER-BRADLEY**
(*University of Sheffield, England*)

(Letter dated 19th May 1955)

I wish to support Dr. W. J. Arkell's proposal to place certain Ammonite names on the *Official List of Family-Group Names*, which I understand has been registered as Application Z.N.(S.) 954.

(b) By **D. T. DONOVAN**
(*University of Bristol, England*)

(Letter dated 23rd May 1955)

With regard to Dr. Arkell's proposals for the addition to the *Official List of Family-Group Names in Zoology* of a number of family-group names for Ammonoidea, a copy of which he has sent to me, I fully concur with his proposal that the seven names listed in his para. 6 should be added to the *List* in their correct form, to be accepted as dating from their original publication in unorthodox form by the authors cited. In view of the lack of uniformity as to termination of family-group names in the earlier ammonoid literature, any other course would, in my opinion, be undesirable, and would give rise to unnecessary difficulty.

(c) By **C. W. WRIGHT**
(*London*)

(Letter dated 16th February 1958)

I should like to support strongly Dr. Arkell's application in respect of the family-group name OLCOSTEPHANIDAE, which is of great importance in the Lower Cretaceous. Similarly the generic name on which it is based, *Olcostephanus*, should be firmly established in its proper form.

SUPPORT FOR MR. P. C. SYLVESTER-BRADLEY'S PROPOSAL FOR THE USE OF THE PLENARY POWERS TO DESIGNATE FOR THE GENUS " DACTYLIOCERAS " HYATT, 1867 (CLASS CEPHALOPODA, ORDER AMMONOIDEA) A TYPE SPECIES IN HARMONY WITH ACCUSTOMED USAGE

(Commission Reference : Z.N.(S.) 956)

PURCHASED

(a) By **W. J. ARKELL**
(*Sedgwick Museum, Cambridge*)

(Letter dated 20th May 1955)

I have received from Sylvester-Bradley a copy of his application for the use of the Plenary Powers to legalise accustomed usage in the matter of the genus *Dactylioceras*, and having studied it carefully I am in complete agreement and wish to support his application.

You will notice that his proposal in paragraph 18(5) of his paper overlaps with a paper I sent you the other day and which crossed Bradley's communication in the post. I leave you to sort out this overlap.

(b) By **L. F. SPATH**
(*British Museum (Natural History), London*)

(Letter dated 20th May 1955)

I should like to support Mr. P. C. Sylvester-Bradley's application for the use of the Plenary Powers to designate a type species for the genus *Dactylioceras*, Hyatt, 1867, in harmony with accustomed usage. After all, *Ammonites communis* Sowerby (J.), 1815, should have been the obvious type species of *Dactylioceras* from the start and was probably regarded thus by Hyatt.

(c) By **D. T. DONOVAN**
(*University of Bristol, England*)

(Letter dated 23rd May 1955)

I wish to support the application by Mr. P. C. Sylvester-Bradley to the International Commission to set aside previous designations of the type species of the genus *Dactylioceras*, and to fix the type species of this genus as *Ammonites communis* Sowerby, 1815. This species has often been cited as a typical example of *Dactylioceras* and its formal designation would stabilise the universally accepted interpretation of the generic name.

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Draft of the English Text of the " Régles "

The attention of zoologists and palaeontologists is drawn to the publication on 29th November 1957 of the draft of the revised English Text of the " Régles " which will form the basis of the discussions by the Colloquium on Zoological Nomenclature and the Fifteenth International Congress of Zoology in London in July 1958. This document has been published in two instalments as Sextuple-Part 1/6 and Triple-Part 7/9 of Volume 14 of the " Bulletin of Zoological Nomenclature ".

All enquiries in regard to the above and other publications issued by the International Trust for Zoological Nomenclature should be addressed to : The Publications Officer of the Trust, 41 Queen's Gate, London, S.W.7.

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Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

PURCHASED
- 9 DEC 1958

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 16, Part 3 (pp. 81—104, T.P.—(VIII)) *24th November* 1958

PROPOSED ADDITION TO THE " OFFICIAL LIST OF SPECIFIC NAMES IN ZOOLOGY " OF THE SPECIFIC NAME " DUPONCHELI " STAUDINGER, 1871, AS PUBLISHED IN THE COMBINATION " LEUCOPHASIA DUPONCHELI ", A WELL-KNOWN NAME WHICH HAS BEEN RECENTLY THREATENED (CLASS INSECTA, ORDER LEPIDOPTERA)

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*London*)

and

LEO SHELJUZHKO

(*Zoologische Sammlung des Bayerischen Staates, München*)

- 9 DEC 1958

BRITISH MUSEUM (NATURAL HISTORY)

(Commission Reference : Z.N.(S.) 1324)

The purpose of the present application is to ask the International Commission on Zoological Nomenclature to place on the *Official List of Specific Names in Zoology* the specific name *duponcheli* Staudinger, 1871, as published in the combination *Leucophasia duponcheli*, and thus to protect the name for a well-known European species of the family PIERIDAE which, though perfectly valid, has recently been threatened as the result of a misunderstanding of the earlier history of this and certain associated names. Two closely allied species are involved in this case and it will be convenient to refer to these species at this stage as Species " A " and Species " B " respectively.

2. The first of the species concerned (species " A ") is *Papilio sinapis* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) **1** : 468). This is the species known in England as the " Wood White " and in Germany as the " Lichtwald-Weissling " or " Senfweissling ". It is the type species by monotypy of the genus *Leptidea* Billberg, 1820 (*Enum. Ins. Mus. Billberg.* : 76).

3. The first author subsequent to Linnaeus, whose treatment of the above species (species " A ") we have to consider, is Jacob Hübner. In all, Hübner dealt with this species three times in his *Sammlung europäischer Schmetterlinge*. The references are as follows :—

(a) On Pl. Pap. 82, figs. 410–411 (published between December 1799 and April 1800) Hübner figured the upper- and under-side of a female.

He placed the species in the genus *Papilio* and misspelled its specific name as " *senapis* ".

(b) In the relevant portion (: 64) of the so-called " Ziefer " text Hübner gave a description of this species which he again called *Papilio senapis* [sic]. He gave a reference to his figures 410–411 and stated that the " Heimat " of this species was " Deutschland ". This portion of the text was published in 1806 between August and November.

(c) On Pl. Pap.160, figs. 797–798 (published in 1823 between April and December) Hübner figured the upper- and under-side of a male specimen of the spring brood of this species under the name *Papilio lathyri*. (As will be seen in the immediately following paragraph this was not the first publication of the specific name *lathyri*.)

(Note : Until about twenty years ago when the surviving Hübner manuscripts became available for study, the dates attributable to names published by Hübner in his various works had been surrounded by much doubt. The dates here adopted are thus determined in the light of a detailed survey of these manuscripts by Hemming, 1937 (*Hübner*, vol. 1).)

4. Species " A " was dealt with also by Hübner in another work which appeared in parts in the period 1816–1825 under the title *Verzeichniss bekannter Schmettlinge* [sic]. In this work, as is well known, Hübner adopted a much more elaborate system of classification for the Order Lepidoptera, dividing up the broad genera (*Papilio*, *Sphinx*, *Bombyx*, etc.) which alone he had recognised in the *Sammlung europäischer Schmetterlinge* into a large number of new genera. One of the genera so recognised (: 95) was the genus *Leptosia* Hübner, which he had already established in 1818 in his *Zutr. z. Samml. exot. Schmett.* (1 : 13). The type species of this genus by selection by Butler (1870, *Cist. ent.* 1 : 54) is *Leptosia chlorographa* Hübner, 1818 (*loc. cit.* 1 : 13, pl. [9], figs. 47, 48), a taxon which is currently regarded as being a subspecies of the Indo-Oriental species *Leptosia nina* (Fabricius, 1793) (= *Papilio nina* Fabricius, 1793, *Ent. syst.* 3(1) : 194). Although this is not a Palaearctic genus, it requires consideration here because the first of the four nominal species placed in it by Hübner in the *Verzeichniss* was the species which we have agreed to call species "A". This appeared here under the name *Leptosia lathyri*, which was defined by two references cited as follows : " Senapis [sic] Linn. Syst. Pap.79. Hübn.Pap.410.411 ". This use of the specific name *lathyri* by Hübner was published in [1819], thus antedating by four years the use by Hübner of the same name on plate Pap.160 of the *Sammlung europäischer Schmetterlinge* which (as shown in paragraph 3(c) above) was not published until 1823.

5. As shown above, the nominal species *Leptosia lathyri* Hübner, [1819], as established in the *Verzeichniss*, was based partly upon *Papilio sinapis* Linnaeus,

1758, and partly upon the specimen of that species figured by Hübner (figs. 410, 411) in [1799–1800] under the name *Papilio senapis* [sic]. The usage of the name *lathyri* by subsequent authors to denote the spring-brood form of Species " A ", for which it was first employed in 1823 on Hübner's pl. Pap.160 (figs. 797, 798), is thus seen to be incorrect, Hübner not having used it in this sense when in [1819] he first introduced this name. In order to put an end to further discussion as to the interpretation of the specific name *lathyri* Hübner it is, in our view, desirable that a lectotype should now be selected for the nominal species *Leptosia lathyri* Hübner, [1819]. Accordingly, from the two elements on which (as noted in paragraph 4 above) this nominal species was based we now select the lectotype of *Papilio sinapis* Linnaeus, 1758 (the first of the two elements included by Hübner) to be the lectotype of *Leptosia lathyri* Hübner, [1819]. By this selection the specific name *lathyri* Hübner becomes a junior objective synonym of *sinapis* Linnaeus. (If the other element included by Hübner in his nominal species *Leptosia lathyri*, namely his figures 410 and 411 on plate Pap.82 of the *Sammlung*, had been selected as the lectotype of the above nominal species, the specific name *lathyri* Hübner, [1819], would still have been a junior synonym of the specific name *sinapis* Linnaeus, though in that event this synonymisation would have been subjective only instead of being objective, as it is now through the lectotype selection made above.)

6. Having now established that the oldest available name for Species " A " is *Papilio sinapis* Linnaeus, 1758, and having taken steps which have had the effect of securing that *Leptosia lathyri* Hübner, [1819], is a junior objective synonym of that name, we may turn to consider the question of the name properly applicable to Species " B ". This species which has a much more restricted distribution in the Palaearctic Region than Species " A ", closely resembles it in many ways but can constantly be distinguished from it by the antennae and by the genitalia and other characters.

7. The first author to recognise Species " B " as specifically distinct from Species " A " was Duponchel who described and figured it in 1834 (*in* Godart, *Hist. nat. Lépid. France*, Suppl. 1 (Diurnes) : 274, pl. 43, figs. 4, 5♂), giving as its locality " Provence, Aix ; Languedoc, Florac ". Unfortunately, Duponchel did not give this species a new name, believing that it was the same species as that which in 1823 Hübner had illustrated on pl. Pap.160 (figs. 797–798) of the *Sammlung* and had there called *Papilio lathyri*. Duponchel, believing that this specific name was available for his new species (Species "B"), called it *Pieris lathyri*. As has been pointed out (paragraph 3(c) above) Hübner's figures 797–798 represented no more than a male of the spring brood of Species " A " (*Papilio sinapis* Linnaeus), strongly marked examples of which do sometimes resemble Species " B ". The point which it is important to note here is that Duponchel did not introduce the name *lathyri* as a new name of his own ; all that he did, when describing " Species B ",

was to misidentify with that species the figures of Species " A " published by Hübner in 1823 and in consequence mistakenly to apply to Species " B " a specific name (*lathyri* Hübner) previously applied to Species " A ".

8. Duponchel's misidentification of Hübner's figures 797–798 with Species " B " and the consequent use of the name *lathyri* Hübner for that species continued unchallenged for nearly forty years, that name being used in that sense, for example, by Boisduval ([1836]), Doubleday (1847) and Herrich-Schaeffer (1848 ; 1851). The mistake made by Duponchel was not detected until 1871 in which year Staudinger (1871, *in* Staudinger & Wocke, *Cat. Lep. europ. Faunengeb.* : 5) gave the name *Leucophasia duponcheli* to Species " B ". In introducing this name Staudinger first remarked " Lathryi Hb. aliae sp. est var." and then cited the following references which collectively form the basis of his new nominal species : " *Lathyri* Dup. I, 43.3.4 (1832) ; HS. 407–8 ; Bell. Ann. S.Fr.1869 p. 513 (non praec. [i.e. *sinapis* Linnaeus] var.) ". Staudinger gave for this species the following indication as to its distribution : " Gall.m. ; Ped. ; Bith. ; Pont.". In the case of a nominal species such as *Leucophasia duponcheli* Staudinger which rests entirely upon bibliographical references to earlier descriptions and figures published under a different name and for which a wide range of localities was cited by its author, it is desirable that it should be given a fully determinate character by the selection for it of a lectotype and by the designation of a " Restricted Locality ". In the present case no such action has hitherto been taken and we take the present opportunity to do so. Fortunately, there is in this case no doubt as to the choice which should be made, for the use by Staudinger of the specific name *duponcheli* for this species clearly indicates that it was the specimens described by Duponchel in 1834 (not 1832, as incorrectly stated by Staudinger) in the Supplement to Godart's *Hist. nat. Lépid. France* (Suppl. 1 (Diurnes) : 274, pl. 43, figs. 4, 5♂) (the first of the works cited in the original description of this species) which Staudinger principally had in mind when he established the nominal species *Leucophasia duponcheli*. We accordingly here select as the lectotype of this nominal species the specimen shown by Duponchel as fig. 4 on his plate 43. From the two localities cited by Duponchel, we here select " Aix-en-Provence " to be the " Restricted Locality " for this species.

9. Staudinger's action in 1871 in rejecting the name *lathyri* Duponchel for Species " B " and in giving it the new name *duponcheli* was undoubtedly correct : (a) because Duponchel did not publish the name *lathyri* as a new name for Species " B ", doing no more than to apply to it the name *lathyri* as applied by Hübner in 1823 to two figures (figs. 797, 798) published in the *Sammlung europäischer Schmetterlinge* ; (b) because, contrary to Duponchel's belief, the specimens figured by Hübner belonged to Species " A " and not to Species " B " ; (c) because, even if the specimens figured by Hübner in 1823 had belonged to Species " B ", the name *lathyri* Hübner could not have been properly employed for that species, since *lathyri* Hübner, as of 1823, was not a

new name, being no more than a later usage of the same name as published by Hübner in the *Verzeichniss* (paragraphs 4 and 5 above) where it was applied to the nominate subspecies of Species " A ", i.e. to the subspecies of that species to which in 1758 Linnaeus gave the name *Papilio sinapis*. We may sum up this part of the subject by observing that neither Hübner in 1823 nor Duponchel in 1834 published the name *lathyri* as a new name but that, even if either of them had done so, that name could not have become the valid name for Species " B ", for, as the same name had previously been published (in [1819]) as a name for Species " A ", which is regarded by all authors as being congeneric with Species " B ", the name *lathyri* as applied to Species " B " would have been invalid as a junior secondary homonym of the name *lathyri* as previously applied to Species " A ".

10. The action taken by Staudinger in 1871 won immediate acceptance from his contemporaries and for nearly ninety years now Species " B " has been known by the specific name *duponcheli* Staudinger, 1871, the name which properly belongs to it. In the last few years, however, two authors have sought to resurrect the specific name *lathyri* for Species " B ". These are : (1) Verity (R.) (1947, *Farfalle diurne d'Italia* **3** : 116), who based his action on the fallacious argument that, although published as a specific name, the name *lathyri* Hübner applied only to an infra-subspecific form and therefore did not invalidate the later use of the same name by Duponchel as the specific name for Species " B " ; (2) Wiltshire (E.P.) (*Lep. Iraq* : 20), who gave no reason and was presumably following Verity. It is very important to forestall the confusion which would arise if the phantom name *lathryi* Duponchel were once more to make its way into the literature and it is for this reason that we now ask that this matter be disposed of : (a) by the addition of that name to the *Official Index of Rejected and Invalid Specific Names in Zoology*, and (b) by the addition of the name *duponcheli* Staudinger, 1871, as published in the combination *Leucophasia duponcheli*, to the *Official List of Specific Names in Zoology*.

11. In addition to the foregoing which are our principal recommendations there are certain others involved either directly or indirectly in the present case which we consider should be included for the sake of completeness. First, the specific name *lathyri* Hübner, [1819], as published in the combination *Leptosia lathyri*, which, as shown in paragraph 5 above, is a junior objective synonym of *sinapis* Linnaeus, 1758, as published in the combination *Papilio sinapis*, should be placed on the *Official Index of Rejected and Invalid Specific Names in Zoology*. Second, the specific name *sinapis* Linnaeus, 1758, as a name closely involved in the present case, should be placed on the *Official List* and so also should the specific names *nina* Fabricius, 1793, as published in the combination *Papilio nina*, and *chlorographa* Hübner, 1818, as published in the combination *Leptosia chlorographa* (paragraph 4 above). At the same time the Erroneous Subsequent Spelling *senapis* Hübner, [1799–1800] (paragraph 3(a) above) should be placed on the *Official Index*. The nominal species *Papilio*

sinapis Linnaeus, 1758, is the type species of *Leptidea* Billberg, 1820 (paragraph 2 above) which should now be placed on the *Official List of Generic Names in Zoology*, while its junior objective synonym *Leucophasia* Stephens, 1827 (*Ill. Brit. Ent.*, Haustellata **4** : 24), of which the same species is the type species by monotypy, should be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*. The following names should also be placed on the *Official Index* :—(1) *Leptidia* Scudder, 1875 (*Proc. Amer. Acad. Arts Sci.*, Boston **10** : 204) (an Erroneous Subsequent Spelling for *Leptidea* Billberg, 1820) ; (2) *Leptoria* Stephens, 1835 (*Ill. Brit. Ent.*, Haustellata **4** : 404) (an Erroneous Subsequent Spelling for *Leptosia* Hübner, 1818). In addition, the generic name *Leptosia* Hübner, 1818, with *Leptosia chlorographa* Hübner, 1818, as type species (paragraph 4 above) should be placed on the *Official List*. Finally, at the family-group-name level the name LEPTIDEIDI Verity, 1947 (*Farfalle diurne d'Italia* **3** : 114) should be placed on the *Official List of Family-Group Names in Zoology*, while the following invalid names should be placed on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* : (a) LEPTOSIIDI Wheeler (G.), 1903 (*Butts. Switz.* : 65, 147), a name which under *Declaration* 28 (1956, *Ops. Decls. int. Comm. zool. Nomencl.* **14** : xi–xxiv) is invalid because its author was under the mistaken belief that the type species of its type genus (*Leptosia* Hübner, 1818, *Zutr. z. Samml. exot. Schmett.* **1** : 13) was *Papilio sinapis* Linnaeus, 1758, whereas in fact its type species by selection by Scudder (S.H.) (1875, *Proc. Amer. Acad. Arts Sci.*, Boston **10** : 204) is *Leptosia chlorographa* Hübner, 1818, a species which, as noted in paragraph 4 above, is not congeneric with *Papilio sinapis* Linnaeus, 1758, and indeed not closely related to it ; (b) LEPTIDIINAE Bryk, 1955 (*Ent. Tidskr.* **76** : 19), an Erroneous Subsequent Spelling for LEPTIDEINAE.

12. For the reasons set forth in the present application, we ask the International Commission on Zoological Nomenclature :—

(1) to place the under-mentioned specific names on the *Official List of Specific Names in Zoology* :—

(a) *duponcheli* Staudinger, 1871, as published in the combination *Leucophasia duponcheli*, as interpreted by the lectotype selected, and by the " Restricted Locality " designated, in paragraph 8 of the present application ;

(b) *sinapis* Linnaeus, 1758, as published in the combination *Papilio sinapis* (specific name of type species of *Leptidea* Billberg, 1820) ;

(c) *chlorographa* Hübner, 1818, as published in the combination *Leptosia chlorographa* (specific name of type species of *Leptosia* Hübner, 1818) ;

(d) *nina* Fabricius (J.C.), 1793, as published in the combination *Papilio nina* ;

(2) to place the under-mentioned specific names on the *Official Index of Rejected and Invalid Specific Names in Zoology* :—

(a) *lathyri* Hübner, [1819], as published in the combination *Leptosia lathyri* (a junior objective synonym of *sinapis* Linnaeus, 1758, as published in the combination *Papilio sinapis*, through the lectotype selection made in paragraph 5 of the present application) ;

(b) *lathyri* Hübner, [1823], as published in the combination *Papilio lathyri* (not a new name but a later, though different, usage of the name specified in (a) above) ;

(c) *lathyri* Duponchel, 1834, as published in the combination *Pieris lathyri* (not a new name but a later usage of the name specified in (a) above, based on a misidentification of the taxon so named) ;

(d) *senapis* Hübner, [1799–1800], as published in the combination *Papilio senapis* (an Erroneous Subsequent Spelling for *sinapis* Linnaeus, 1758, as published in the combination *Papilio sinapis*);

(3) to place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—

(a) *Leptidea* Billberg, 1820 (gender : feminine) (type species, by monotypy : *Papilio sinapis* Linnaeus, 1758) ;

(b) *Leptosia* Hübner, 1818 (gender : feminine) (type species, by selection by Butler (1870) : *Leptosia chlorographa* Hübner, 1818) ;

(4) to place the under-mentioned generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

(a) *Leptidia* Scudder, 1875 (an Erroneous Subsequent Spelling for *Leptidea* Billberg, 1820) ;

(b) *Leptoria* Stephens, 1835 (an Erroneous Subsequent Spelling for *Leptosia* Hübner, 1818) ;

(c) *Leucophasia* Stephens (J.F.), 1827 (a junior objective synonym of *Leptidea* Billberg, 1820) ;

(5) to place the under-mentioned family-group name on the *Official List of Family-Group Names in Zoology* :—

LEPTIDEIDI Verity (R.), 1947 (type genus : *Leptidea* Billberg, 1820);

(6) to place the under-mentioned family-group names on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* :—

(a) LEPTIDIINAE Bryk, 1955 (type genus : *Leptidea* Billberg, 1820) (an Erroneous Subsequent Spelling for LEPTIDEINAE) ;

(b) LEPTOSIIDI Wheeler (G.), 1903 (invalid under *Declaration* 28 because based upon an incorrect determination of the type genus, *Leptosia* Hübner, 1818).

CORRIGENDA

page 48. Paragraph 2, line 7 : substitute " **13** " for " **12** "

page 65. Paragraph 8, line 7 : substitute " PLEURACANTHITIDAE " for " PLEUROACANTHITIDAE "

page 72. Paragraph 6(1)(b), first line : substitute " *gemmascens* " for " *gammascens* "

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